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CRITICAL NOTICES OF THE FIRST EDITION.

- "We have examined this volume with great care, and have risen from its perusal with the highest respect for the judgment and information of the author; he has supplied a great desideratum in medicine, and we trust will continue to study still further the diseases of infancy and childhood, a pursuit for which he has shown himself so well adapted. This work contains a vast quantity of accurate information, communicated in clear and unassuming language." Dublin Journal of Medical Science, Sept. 1838.
- "We strongly recommend it to those commencing general practice, to whom the diseases of infants are often a stumbling block."—British and Foreign Medical Review, Oct. 1838.
- "Under an unpretending form, the small volume before us contains a great deal of valuable information connected with the treatment of infantile disease."—The Lancet, June, 1838.

For other favorable notices of this work, see the *Medico-Chirurgical Review* of Oct. 1838, and the *Medical Gazette* of July, 1838.

PRACTICAL COMPENDIUM

VICTORIA UNIVERSI

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THE MATERIA MEDICA,

ADAPTED TO THE

TREATMENT OF THE DISEASES

INFANCY AND CHILDHOOD;

NUMEROUS PRESCRIPTIONS.

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MEMBER OF THE ROYAL COLLEGE OF SURGEONS, LONDON.

ENLARGED EDITION. CONTAINING

SIMPLE RULES FOR THE DIET AND REGIMEN OF CHILDREN, AND A GLOSSARY OF TECHNICAL TERMS,

LONDON:

SHERWOOD, GILBERT, AND PIPER, PATERNOSTER ROW.

1839.

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ADVERTISEMENT

TO THE PRESENT EDITION.

In now annexing a Chapter on the Diet and Regimen of Children to his Practical Compendium, the Author gladly embraces this opportunity of expressing his gratitude to the leading medical journalists for the kind manner in which they have been pleased to notice his humble labours.

Feb. 1839.

EXPLANATIONS.

The mark $\frac{3}{3}$ signifies ounce.

3 — drachm, or $\frac{1}{8}$ th of an ounce.

3 — $\frac{3}{2}$ scruple, or $\frac{1}{3}$ d of a drachm.

The letters ss signify half; thus, $\frac{3}{2}$ ss. represents half an ounce; $\frac{3}{2}$ ss. half a drachm: -gtt. stands for drops; so, also, do the

5ss. half a drachm:—gtt. stands for drops; so, also, do the letters dr:—ft. signifies fluid; thus, 3j. ft. means the fluid drachm:—gr. stands for grains.

PREFACE.

THE intention of the present work is to furnish an epitome of the most approved remedies for the treatment of the diseases of infancy and childhood; comprehending their mode of operation, their curative effects, their doses, and forms of employment: an accurate knowledge of this kind being of paramount importance in reference to that tender period of life.

Throughout its pages much valuable information will be found embodied, from the writings of Eberle, Evanson and Maunsell, Clark, Paris, Thomson, and Pereira. But it is to Fränkel's "Practische Heilmittellehre für die Krankheiten des kindlichen Alters," lately published at Berlin, that the author is indebted for the original idea and plan, and for many interesting particulars relating to the

practice of the German physicians, in a department where they have acquired high and deserved celebrity.

The author is fully aware that, in the art of curing infantile maladies, but few remedial agents are needful; yet he has deemed it expedient to introduce a variety, which have at different times been recommended by practitioners of reputed skill, leaving his readers to judge of their respective merits.

The materia medica is arranged in alphabetical order, according to the London Pharmacopæia of 1836; in conformity with which some of the continental prescriptions have been modified.

The author gratefully embraces the present opportunity of acknowledging the advantages afforded him a few years ago in connexion with this subject, while following the excellent clinical practice of Dr. Barez, Director of the Institute for the Diseases of Childhood at Berlin; and of Mons. Guersent, Physician to the Hospital for Sick Children at Paris.

13, Charlotte Street, Bedford Square; Feb. 1839.

"TEDICAL DEPARTMENT, YORKSHIRE COLL**ECS,**VIOTORIA UNIVERSI

PRELIMINARY DISSERTATION.

BLOODLETTING.

ABSTRACTION of blood abates the momentum of the circulation, and constitutes the most prompt and efficient means of counteracting active inflammation or congestion

in every stage of life.

Early childhood, as the period of organic growth and development, is characterized by remarkable activity in the functions of assimilation and nutrition, as well as by extreme mobility and impressibility of the sentient system. The heart, from the great relative thickness of its aortic ventricle, beats with peculiar velocity and power, causes proportional frequence and force of respiration, and a circulation in the brain far more vivid and

expansive than in later years.

The elements of growth if augmented, interrupted, or at all interfered with, become the fruitful source of disease. Increased vascular action rises into high inflammation; and its effects, becoming manifest in the brain, the air-tubes, &c., bring life into jeopardy, and demand the most immediate and decisive medical treatment to avert a fatal result. In the infant, indeed, the slightest exciting causes suffice to disturb the equilibrium of functions essential to health; so that, where external morbific impressions are made, dangerous diseases almost certainly supervene.

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Blood being the spring of animal life, the indispensable material for the formative process, and the natural stimulant of every vital function, there is no more efficacious means than due depletion of the sanguiferous vessels to prevent irritation from passing into congestion, and inflammation into effusion. Whenever increased irritability co-exists with arterial force and frequency, no time should be lost in resorting to this primary step in the antiphlogistic treatment, since the efficacy of other reme-

dial means is thereby enhanced.

Bloodletting must be accurately adjusted in every instance to the urgency of the symptoms, and the powers and susceptibility of the patient. "In mittendo sanguine, non tam annos medicus numerare, quam vires ægrotantis estimare debet." (Celsus, lib. ii. cap. 10, p. 78.) It must never be overlooked that, in acute diseases, everything depends upon the promptness and efficacy of this remedy. "Very young children," says the late Dr. Clarke, "bear very well the loss of blood, even to fainting once or twice, but they ill bear a more frequent repetition of bleeding." If carried too far the infant, from innate feebleness and irritability of frame, may be plunged into a state of irremediable collapse and prostration, or, although he should support perhaps the first effects of the operation, he may ultimately sink under reiterated convulsions or dropsical cachexy. Thus, rational sanguine emission is one of the most important, but, at the same time, one of the most delicate and difficult points in infantile therapeutics.

Before describing the modes of abstracting blood, some preliminary observations are subjoined as to its curative employment in different affections incidental and

peculiar to childhood.

1. In infants born in an oppressed and apoplectic condition, when the umbilical cord continues to pulsate, relief may in general be speedily obtained by promptly dividing the cord and suffering more or less blood to escape. As the blood flows, the lividity and turgid

state of the countenance usually disappear, and, in a short time, the infant begins to breathe. The efficacy of this measure may in general be enhanced, by supporting the child's head in an elevated position, applying cold water to the scalp, and immersing the inferior extremities

and hips in the warm bath.

2. In febrile affections and exanthematous diseases, it may be laid down as a general rule, that, whenever at the commencement the inflammatory diathesis is predominant, when the fever is violent, continued, and complicated with some cerebral or chest affection, or when some important organ is the seat of constant pain, sanguineous depletion should be straightway resorted to. In infantile remittents, if the patient is robust and plethoric, much advantage may be derived from the abstraction of an ounce or two of blood, either with the lancet or by leeching about the head; and when the pulse continues to be active and tense, and there are decided indications of cerebral irritation, the bleeding ought to be regulated so as to make an evident impression upon the heart and arteries.

In congestive catarrhal fever, when there is considerable fulness and activity in the pulse, the abstraction of a small quantity of blood will often procure prompt and very decided relief; but when the pulse is very frequent, tiny, and feeble, as it sometimes is, blood cannot be drawn without considerable risk of increasing the prostration to a fatal degree.

In measles, when a high grade of fever of a congestive tendency is present, or when complicated with visceral inflammation, bleeding is necessary. It may be effected either by cupping, or else by leeching the leg or arm, as the child will be less exposed to taking cold during the

application.

If much febrile irritation be present in scarlatina, it must be moderated by similar means: but in this affection, under the greatexpenditure of nervous energy which takes place over the whole of the capillary surface, the

cerebro-spinal axis appears at times to be in a state very different from that of inflammation or of active congestion. It is rather exhausted by the unwonted energy of the organic portion of the nervous system; and accordingly, in many such cases, the use of diffusible excitants has been found serviceable, the delirium or the coma gradually disappearing as the system begins to feel their compensating influence. This practice has been successfully adopted by Drs. Baer and Dunglison, when, under the vigorous use of depletion, the symptoms have seemed to be aggravated.

In infantile erysipelas, when the child is robust, and the pulse and general appearance of the little patient indicate a high degree of febrile reaction, depletion may be resorted to with much propriety. Two or three leeches may be applied, and always to the sound skin surrounding the inflammation. Leeching is most apt to prove beneficial where the erysipelatous inflammation is of an erythematous character, that is, superficial, with but little swelling and infiltration of the subjacent

cellular tissue.

3. In inflammations, (the "phlegmasiæ" of Cullen,) especially of the serous membranes, and of the mucous membrane of the larynx known under the name of "croup," rapid depletion is, for reasons above assigned, indispensable; and it may be established as a general rule that the abstraction of a certain quantity of blood at the first bleeding is of greater utility in stopping the progress of inflammation than several small bleedings, at intervals more or less distant.

During dentition, from the additional quantity of blood circulating through the brain, the irritability of that organ, and of the nerves connected with it, becomes exalted; the increased energy of the brain increases the action of the heart and arteries, so that the pulse becomes frequent, full, and strong. Active dentition is often the forerunner of membranous inflammation and subsequent sub-arachnoid effusion at the base of the brain,

or of serous exudation into the ventricles. Hence, whenever encephalic inflammation supervenes, and the pulse is firm and active, a sufficient quantity of blood should be taken away at once, to check effectually the force of the circulation. "The temporal artery, or a vein in the arm, should be opened, and the blood allowed to flow until a very obvious impression is made on the system, or until the morbid actions of the vascular system of the brain are totally changed. That such an effect has taken place, may be known by a paleness of the countenance, a shrinking of the features, and a tendency to deliquium; or by a diminution or removal of the heat, pain, weight, or uneasiness of the head." (Mills.) The bloodletting ought to be repeated as soon as the febrile reaction and local inflammatory symptoms recur. In cases depending on enteritic irritation, bloodletting must be employed with more caution.

After the impetus of the circulation has been moderated by the use of the lancet, leeching the temples, and the posterior parts of the ears, is a valuable auxiliary in the treatment of arachnitis. Dr. Mills strongly recommends leeching immediately after venesection, "in order to postpone the period of the exacerbation, or break the chain of diseased action. I have observed that these two modes of drawing blood, when successfully employed, make a greater impression on the disease than either of them is capable of effecting when

singly had recourse to."

Dr. Klohss (Die Gehirnwassersucht der Kinder, Berlin, 1837,) considers leeching of itself sufficient in the majority of cases of acute hydrocephalus. The number of leeches varying according to their activity, the age, and constitution of the patient, the cause and violence of the disease, and the prevailing epidemic. He prefers applying a large number at once, and speedily reducing the hæmorrhage by stopping the orifices, to a small number allowed to bleed for a length of time; because, the blood is more promptly withdrawn, the annoyance

sooner over, and other auxiliary means can be resorted to at an earlier period. The forehead, temples, and mastoid region are the best situations for placing them. He deprecates opening the temporal artery or jugular vein, regarding general bloodletting as altogether super-

fluous in the case of young children.

In acute bronchitis bloodletting is a highly valuable means of relief. In robust and plethoric infants, particularly when the pulse is active, prompt and efficient bleeding, either with the lancet or by leeching, may be deemed indispensable. The blood ought, however, to be abstracted at an early period, and before effusion or a copious secretion of bronchial mucus has taken place; after the blood has been abstracted by the lancet much benefit will be derived from the application of leeches to the chest.

In pneumonia and pleuritis, blood should be freely drawn by the lancet, until a decided alteration is made on the pulse. The early application of leeches to the chest is also a very important measure in moderating the momentum of the circulation. In quinsy too, if the pulse be full and active, blood should be drawn without

hesitation.

But in the whole catalogue of inflammatory affections there is no disease in which bleeding, when promptly and sufficiently practised, is more likely to prove beneficial than in croup. "He who, in violent cases, neglects this important measure," observes Dr. Eberle, "and places his hopes on one or more of the empirical remedies that have, by different practitioners, been extolled for their supposed specific tendency to counteract the tracheal affection, will, we may be assured, have but little reason to flatter himself for his success in the management of this malady. Here, however, as in most of the other phlegmasial diseases, the beneficial effects of bleeding are limited to the early period of the complaint. If bleeding be neglected or inefficiently employed in the first stage of the malady, its progress will be extremely perilous, whatever other remedial

measures may be adopted."

The blood should be suffered to flow till a marked impression is made on the system; and if, after the lapse of an hour or two, the fever and difficulty of breathing return, and the pulse does not become soft and weak, more blood should be drawn, and repeated till a decided impression has been made on the febrile and inflammatory symptoms. The best mode of procedure in this disease is to have the patient supported in an erect posture, with his feet immersed in warm water, whilst venesection is being performed. Dr. Stokes, of Dublin, directs, after general bleeding from the jugular or brachial veins, that leeches be applied to the region of the larynx in numbers proportioned to the age and strength of the patient; and that their application be renewed again and again, until a decided impression is made on the disease. (Diseases of the Chest, p. 217.)

In laryngitis, a most rapid and dangerous affection, bloodletting, to the extent of producing fainting, ought to be regarded as an indispensable measure of treatment. After blood has been efficiently drawn with the lancet, leeches should be largely applied to the throat.

In infantile jaundice attended with a febrile condition and symptoms indicative of hepatic inflammation,—such as fulness and tenderness in the region of the liver, a very scanty secretion of high-coloured urine, absence of the respiratory motions of the abdominal muscles, frequent nausea and vomiting, and an expression of pain and suffering in the countenance,—the application of leeches is indicated. Indeed the local abstraction of blood, in cases of the kind, is of the utmost importance, and ought never to be omitted where it is practicable.

In blennorrheal ophthalmia the treatment during the early stage must be strictly antiphlogistic; two or three leeches should be applied to the external angle of each eye or to the mastoid region, and the bleeding from the

dressing or a soft poultice may be applied. Should it, on the other hand, become pale, with ash-coloured spots, and surrounded by dull or livid redness, stimulants must be used.

A favourite lotion with the late Dr. Cheyne was one composed of camphorated spirits of wine and infusion of chamomile flowers (3j. to the 3j.) applied frequently by linen cloths. An excellent mode, when it begins to slough, is to pencil over the part with a solution of nitrate of silver, (gr. x.—9j. to the 3j.,) and then apply a warm poultice, as much pain attends the application. To obviate gangrene fermenting cataplasms are to be employed, and the child, at the same time, supported by nutritious diet—broths, jelly, arrow-root, giving along with them ammonia and quinine. (See some remarks on this subject in the work of Drs. Evanson and Maunsell.)

Although intermittent revulsion be more efficacious than permanent, yet particular instances have been cited in which it is expedient to maintain the discharge from the blistered surface. For this purpose it may be dressed twice a day, with the ceratum resina, unguentum elemi, or, if these prove inefficient, with a salve made with four parts of resinous ointment, and one of powdered savine, the unguentum cantharidis being apt to

excite strangury and vesical irritation.

EMETICS.

IT is a physiological truth that the act of vomiting is more easily accomplished, the more elongated the stomach, and the more it resembles the intestines in conformation. Hence, infants, on account of the greater similarity of their stomachs to that of carnivorous animals, vomit with much more facility than old people, the structure of whose stomach inclines more to that of the herbivorous tribes. (Schultz.) This increased aptitude to vomit may be regarded as a wise provision of the author of nature, the great majority of the ills which infancy is heir to, being the result of disordered digestion. Emetics, therefore, constitute one of the most important articles of infantile therapeutics: they are evacuants and revulsives. The first impression made by them being one of diminished power; the second one of equalization: for, after the nausea and vomiting are over, an increased energy is communicated to the nervous and sanguiferous systems, so that the blood is made to circulate more freely through the capillary vessels. And thus it is that emetics promote the functions of absorption and exhalation.

It may be laid down as a general rule that, in cases attended with strong congestion of the vessels of the head, the operation of an emetic is attended with considerable risk of injury; because, during the inverted action of the stomach, the respiration being more or less impeded, as also the flow of blood through the lungs, the right side of the heart becomes gorged and can no longer admit the usual flow from the venæ cavæ; and this obstruction, which is greater with respect to the descending than the ascending cava, is attended

direct depletion of the sanguiferous vessels is seldom resorted to during the first twelvemonths of existence. The difficulty of the operation, on account of the veins being small and imbedded in fat, and the alarming constitutional effects which may result from the sudden removal of a quantity of blood from the imperfectly developed organism, are sufficient contra-indications to its employment. It is true that Sydenham, Hastings, and Cuming, in this country, and Guersent in France, have recommended venesection in early infancy: but, when it is taken into account, that, by means of capillary bleeding, we can efficiently lower the system, we are warranted, upon the authority of Billard, Laennec, Lorinser, Henke, Vogel, and Seifert, to substitute leeches and cupping for the lancet.

There is indeed one solitary exception to this general rule, namely, where the child is born in an apoplectic condition, and where life may be said to hinge on instantaneous abstraction of blood from the umbilical

vessels.

Whenever a child has attained the age of one year, venesection is safe, and the impression made upon the diseased condition, if one of active inflammation, is more markedly salutary. The external jugular veins are then sufficiently large to admit of drawing blood from them, a most useful practice in affections of the head in children. Alexander, of Tralles, who lived in the sixth century, introduced the operation, which was repeated after him by Paul, of Egina. The manner of performing it is so well described in the commentaries of the late Dr. Clarke, that I take the liberty of placing his instructions before the reader.

"It is best to make an incision in the first instance through the skin, longer than the intended orifice in the vein, so as to expose the vein distinctly, and then to make an incision into the vein itself—by this means a thrombus will be avoided—it will be easy to keep the orifice in the skin, opposite to the orifice in the vein, so that the blood will flow freely—without these pre-

cautions the vein is very apt to roll, in consequence of its loose attachment to the skin and muscles—and the incision does not enter it, or a small orifice only is made into the vein—the blood not flowing readily through the skin, finds a course into the cellular membrane, where it at length coagulates, and the bleeding ceases without any relief having been obtained." (p. 160.)

Dr. Stokes, while recommending this operation in the confirmed stage of croup, and alluding to the facility of performance, owing to the turgid state of the vessels, states that, the practice is liable to some objections; the principal of which are, the difficulty of commanding the hæmorrhage, and the tendency of the act of vomiting to cause fresh discharge of blood, which may, by repetition, endanger the life of the patient. (Op. cit.)

Blood may be likewise obtained from the superficial vessels on the back of the hand, or, in extreme cases,

from the temporal artery.

In reference to quantity, our rules, for reasons formerly assigned, can only be approximative. At this period of life, namely, at twelvemonths, 3 ounces of blood may be taken, and $2\frac{1}{2}$ or 3 afterwards, if the symptoms do not yield; and 2 more may be taken in twelve hours, after the second bleeding, if it be deemed necessary, and the patient has not been too much weakened already.

In discussing the treatment of "broncho-pneumonia," a disease so rife and so fatal in infants, Dr. Seifert makes

the following judicious observations.

"I have never hesitated, in cases of urgency and of great violence of inflammatory symptoms, in performing venesection in children of fifteen or sixteen months old, nor in repeating the operation, if necessary, in the course of the same day. But I have not ventured upon such copious bloodletting as Cuming has recommended and practised in the instance of still younger children, confining myself, in extreme cases, to the evacuation of 2 or, at most, 3 ounces of blood. I have never known bleeding, thus practised, to be followed by any detri-

mental effects, nor even by any great degree of weakness or prostration of strength." (Die Bronchiopneumonia der Neugebornen und Sauglinge, Berlin, 1837, p. 253.) After the first dentition, the veins of the arm are, in

After the first dentition, the veins of the arm are, in general, sufficiently marked to be readily opened, except in the instance of very fat subjects. Between the first and the second dentition we may draw from 4 to 10 ounces of blood in the twenty-four hours, the quantity varying according to the nature and seat of the disease. It has been proposed, as a means of facilitating the operation in the case of unruly children, to have the child's arm bound in the proper position to that of an adult. (Gazette Médicale.)

The appearance of the buffy coat cannot, when taken singly, be regarded as a sufficient reason for further abstraction in children. The propriety of repetition must depend upon other symptoms taken along with the buffy coat; because such a coat may be present when there is no inflammatory condition in the system, or when it is by no means to a dangerous extent. Indeed it is much more likely in children to be absent when in-

flammation exists.

In every instance of general bloodletting, the countenance should be carefully watched, and the flow of blood arrested on the very first appearance of pallor; because in early infancy the system does not rally readily from the depression, more especially in diseases in which the degree of inflammatory irritation is not so great as to communicate to the system the full tolerance, and particularly in cases of coma or convulsions, presumed to depend on "congestion," and therefore to require bloodletting. In these the fancied signs of congestion increase after the operation; the further abstraction of blood is, therefore, determined upon; the powers of life fail; passive exudation takes place into the ventricles of the brain; and the child dies from exhaustion — that exhaustion being partly induced by the means adopted for the removal of the malady.—This state of deficient

reaction is detected, readily, by observing the breathing, which seems to be performed almost wholly by the diaphragm; and is always accompanied with the evolution of much flatus. Both circumstances denote a very low state of the nervous energy, which is best obviated by white-wine whey, opium, and ammonia, administered warm, in small quantities and frequently repeated.

2. CAPILLARY BLEEDING

Is effected by Leeches or Cupping. a. Leeches are, in many cases, of indispensable utility in the treatment of infantile diseases. Their direct action is topical abstraction of blood from the capillary vessels of the skin, the flow of blood proceeding gradually from a greater or less extent of surface. Although leeching produce the same general effects, in very young subjects, as venesection, it is not so apt to induce sudden collapse, from the comparative slowness with which the blood escapes. By it, moreover, the blood can be obtained as nearly as possible from the affected part, and the morbidly augmented vascular action, in inflamed organs, can readily be abated in frequency and force.

The general indications for bloodletting, already pointed out, being most safely fulfilled in early life by capillary bleeding, it now remains to treat of the number of leeches to be employed, the place of application, and some other circumstances incidental to their

use.

1. In reference to number it is difficult to assign any specific directions; the age, and temperament of the child, but above all the amount of inflammatory diathesis should be accurately estimated. In order to produce a sudden change in the action of the heart and arteries, Dr. Klohss, as formerly stated, recommends the application of several leeches at once, restraining the hæmorrhage as soon as they drop off. While Fränkel, on the other hand, deems it more expedient to limit the number of leeches, obtaining

the systemic effects by promoting the bleeding from the orifices afterwards; "because," says he, "the crying and restlessness of children, which add to the general irritability, subside on the removal of the leeches, the after-bleeding being the source of no annoyance." Heim and Henke never would apply more than two leeches to children under twelvemonths. According to the former, we may procure from 8 to 12 ounces of blood by that small number, provided the bleeding from their orifices be assiduously encouraged for a couple of hours! Richter was more energetic in his practice, prescribing, in urgent cases, during the first months, three or four leeches. As a general rule, however, it may be laid down, that, of full-sized active leeches, for each of which you may reckon, after half an hour's bleeding, about an ounce of blood, two to three may be applied during the first six months, three to four in the second six months, four to six between the periods of one and three years, six to eight after four years, and eight to twelve after six years. This ratio of computation corresponds, nearly, with that assigned by the experienced Gölis. (Klohss, Op. cit. p. 223.) A return of the acute symptoms demands a repetition of the leeching. It is difficult, and in most cases impossible, to infer from the state of the pulse the adequacy of the bleeding by leeches in children. A better criterion is the relief of the affected organ, as seen in the restoration of its functions. In croup Lentin advises the sanguine emission to be kept up until the lips become blanched. Indeed pallor of the lips and cheeks affords the surest token of the bloodletting having been carried to a sufficient degree, under all circumstances. Dr. Seifert, in discussing the treatment of infantile broncho-pneumonia, contends that the number of leeches are ordinarily underrated by practitioners, observing, that two leeches may answer with delicate children, during the first few days after birth; but for those more advanced, provided the symptoms be urgent, that number may be

raised to four, six, or more, according to the relative amount of blood which these animals may happen to abstract. And, in order to check effectually the progress of a disease so fatal in infancy, the blood must be permitted to flow until the countenance become pale and cool, the lips blanched, the pulse small and attenuated, and until the patient fall into drowsy exhaustion. Although it be undeniable that there are certain forms of acute disease, in which prompt and copious depletion is demanded in the first stages of life, still, if carried too far, salutary reaction is prevented, and an opposite condition of alarming paralysis or convulsion induced.

It merits attention in this place that there are particular individuals who, after the loss of a certain quantity of blood, pass suddenly and unexpectedly into a state of alarming prostration, requiring the utmost care and attention for the support of life. The surface of the body assumes an extreme degree of pallor, the face, hands, and feet become cold, the iris changes colour, acquiring a light tinge, the pulse is frequent and feeble, the breathing rapid, hurried, and rattling, and the child appears unusually agitated and wakeful. These critical symptoms sometimes occur in the sequel of the first, but more commonly in that of the second, third, or fourth bleeding. As the result of leeching, it generally happens that the punctured vessels, being unable to contract, maintain an oozing of blood, which gives rise to well grounded fears for the safety of the patient. There can be no doubt that the above-mentioned circumstance depends on a certain habit of body, altogether independent of disease. But, unfortunately, there is no sign by which we can recognize beforehand the constitutional peculiarity, as it presents itself equally in the blooming and robust, as in the puny and sickly infant. It would appear, however, that those subjects, in whom such disastrous effects take place, are for the most part the offspring of delicate and highly sensitive mothers;

and although the peculiarity in question does not depend on that alone, it is perhaps the only point to which we can attach any importance; wherefore, prompt removal of the leeches and immediate closure of their bites must be effected, on observing that the system is brought

under the influence of the loss of blood.

2. Leeches should generally be applied in the immediate vicinity of the affected part or organ. Thus, in inflammatory disorders of the encephalon, they may be placed behind the ears, upon the nape of the neck, the temples, or the forehead, (Tourtual prefers the nose, the inner angles of the eye, and lower margin of the underjaw;) in cynanche upon the neck; in croup upon the throat; in pneumonia upon the chest; in abdominal inflammation upon that region. Where practicable, leeches ought to be applied over a bone, in order that pressure may be conveniently made when such a course is requisite; those organs should be avoided which, requiring unceasing activity towards the due performance of their functions, will not tolerate continued pressure. In croup, accordingly, the superior border of the clavicle is a commodious position, since their direct application to the throat may be attended with serious objections. Cuming recommended that leeches should always be applied to the back of the hand or foot, as they act here with equal efficiency in moderating high vascular excitement, and the bleeding can be always commanded by means of a compress and bandage. Billard, on the other hand, advises them to be applied to the axillary fossa, and Seifert to the superior part of the sternum, (manubrium sterni.) In congestive and inflammatory affections within the head, the mastoid process is an excellent situation. But uneasiness of the head, referred to the frontal region, chronic inflammation of the eye, and inflammatory affections of the lachrymal sac, are most effectually relieved by bleeding from the ethmoidal vessels by means of a leech applied to the nasal septum, as recommended by Mr. Wardrop, in his

work on Bloodletting. It is, however, proper to avoid the localities where veins are voluminous or very superficial, or where arterial branches are near the surface.

3. As to the manner of applying the leeches there is but little deserving of attention. The leech, withdrawn from the water for about a quarter of an hour and allowed to creep about upon a piece of linen cloth, being held by the fingers, interposing perhaps a fold of linen, or enclosed in a roll of card or glass tube (leech-glass), is to be brought in contact by its pointed extremity with the skin. Should it be slow of attaching itself, a drop of water, sugar and water, milk or blood may be put on the part. Dipping the leech in table beer is very effective. That it has taken, is known to the medical attendant by the vermicular corrugation of the head part, and to the patient by the peculiar biting sensation. Where there is plenty of space, as on the back, the chest, or the belly, and we wish to apply several leeches at once, we have merely to place them in an inverted glass or cylindrical wire-gauze cage over the part until they shall have fastened. This mode of procedure suits well with timorous children. Yet leeches, when crowded together, are much more apt to give rise to erysipelatous inflammation. So long as the leeches adhere they should not be touched, but allowed to drop. off of their own accord. Should they appear, however, to remain too long, their separation will be facilitated by touching them with a little common salt or vinegar; forcible removal being painful, and liable to occasion irritable sores. The subsequent flow of blood may be furthered by dry or moist warmth. flannel or soft flat sponge, wrung out of hot water, answers well.

The bleeding from leech-bites requires the utmost attention in the case of tender infants. Examples of mortal hæmorrhage from this source being by no means rare; hence, the medical attendant ought not to leave the child until he is sure that the hæmorrhage may be

effectively stopped; and, as a general rule, should never order leeches to be applied late at night. The following measures have been proposed for stopping the bleeding of leech-bites:

1. Simply exposing the surface of the part to the external air, and allowing the blood in the orifice to

solidify.

2. Compression is one of the surest means of restraining hæmorrhage, provided there be some firm point of resistance. It may be effected by means of a small fold of lint, not larger than the finger-nail, steadily pressed upon the open orifice with the point of the finger until the blood has ceased to flow. A small cupping-glass has been found to answer in like manner, by inducing tumefaction of the lips of the little wound. Heuermann has described, in the sixteenth volume of Rust's Magazin, a kind of forceps invented by him for pinching up a fold of the integument, and so closing the wound, which Gräfe is said to have improved by the addition of a

spring.

3. Absorbent substances which rapidly imbibe the serum of the blood and favour the coagulation of the fibrine. To these belong agaric or German tinder, charpie, and the like. The wound is to be washed clean with cold water, and a bit of agaric placed upon it, and so retained till it adhere. Frankel recommends the following plan: dry, carefully, the several leech-bites in succession with a piece of lint, and when you have ascertained the bleeding point or points, introduce the extremities of a fibre of agaric, so as to close the orifice, press with the point of the finger for a minute or two, and if on removal there be no more bleeding, fix the plug with a strip of plaster. Should this fail the agaric is to be previously dusted with a styptic powder, consisting of equal parts of alum and gum tragacanth, or of equal parts of rosin, gum arabic, and charcoal.

4. Cauterization effects closure of the wound by

the formation of an eschar. For this purpose we

may use nitrate of silver, chloride of zinc, or creosote, provided the issue of blood be moderate. Touching the point with a red hot wire often succeeds, but is now and then followed by inflammation. A modification of the actual cautery has been proposed, which consists in placing upon the bite a quadruple pad of linen, and over that the flat surface of a spatula, heated to a temperature short of burning. The blood penetrating the textile fibres is coagulated by the action of the heat and the evaporation of its aqueous portion, and a firm clot is established which prevents subsequent bleeding.

5. It often happens, however, that the bleeding cannot be stopped without encircling the orifice with a ligature. For this purpose, the twisted suture, made by crossing two needles and surrounding them tightly with thread, may be adopted. Or, what is more simple, a sewing needle with a silk thread may be made to take up a small portion of integument on each side of the

orifice, and the knot tied gently but firmly.

b. CUPPING and SCARIFICATION.

Many practitioners prefer cupping to leeches, on account of the difficulty of applying them, the long time they take to operate, and the uncertainty as to the amount of blood drawn; this being, in some instances, so inconsiderable as not to answer any good purpose, at other times so great and uncontrollable, as to exhaust and debilitate the patient in an excessive degree. It is incontestable that cupping, when adroitly performed, affords a singularly prompt and efficient means of depleting the sanguiferous vessels, and has this advantage, that the flow of blood can be stopped at discretion. The most convenient situations for cupping young children are the nape of the neck and interscapular space.

During the first six weeks of life, from five drachms to an ounce of blood will commonly relieve inflammatory

symptoms; between six weeks and three or four months, one ounce or an ounce and a half; from a child of seven or eight months old, two ounces may be taken, and one and a half or two more in sixteen hours afterwards; three ounces may be taken from a child of a year old, and as much more in the course of twelve hours, if the symptoms are not subdued. In this proportion, bleedings may be prescribed at subsequent periods of infantile life.

Simple scarification of the surface is, in cases of diffuse inflammation, a most energetic means; half an ounce of blood, taken from the distended vessels, being of more benefit than all other remedies together. In the inflammation of the skin, which constitutes erysipelas, it is excellent practice to puncture the integuments; "and in those varieties of erythematous inflammation of the fauces, which are attended by a deep dusky redness and very painful deglutition, without any degree of swelling of the mucous membrane, of the fauces, or of the subjacent parts, I have seen the most signal relief afforded by scarification through the membrane. The pain on deglutition has been almost instantaneously removed, and the cure has been rapid. In all such cases the scarification should be free. The blood generally flows readily from the divided vessels, retraction of their extremities takes place, and a new adhesive inflammation is substituted for the more sluggish and asthenic kind which constituted the original affection." (Dunglison's Therapeutics, p. 427.)

The good effects of dividing the gums during difficult and painful dentition, may be partly ascribed to the profuse bleeding, which generally follows the

incision.

BLISTERING.

When a common blistering plaster (emplastrum cantharidis) remains for a certain time in contact with the skin, it gives rise to a feeling of pricking and burning, the part becomes red, tense, and tumid, and a quantity of serum being effused by the capillaries, the cuticle is elevated in the form of a vesicle. The effect induced is termed "revulsion," "antispasis," or "derivation;" and it is said by Conradi (Handbuch der Allgemeinen Therapie, s. 91) to be exerted "when a topical congestion, or stimulation, or other affection of a part, leaves that part, and is drawn towards another, and usually less important part." To suppose that blisters act solely by the discharge they create is erroneous. It is the counterirritation which is the great sanative principle, and this may be obtained without vesication. Bégin observes, that the effect of blisters is to elevate the organic actions in parts to which they are applied, or towards which their action is directed, and that are more or less remote from the inflamed organs. So that, independently of their revulsive agency, blisters excite the affected capillaries, and act in the same salutary manner as internal tonics and stimulants.

Epispastics have been resorted to in the treatment of

the following diseases in early life:

1. In acute inflammations; but they are inadmissible before antiphlogistic means, capable of modifying the inflammation or reducing the general febrile state, have

been employed.

a. In inflammatory affections within the head, with a tendency to dropsical effusion. Although most writers concur as to their utility in hydrocephalus, yet great discrepancy exists respecting the exact period at which they should be adopted, and still more as to the situation

they should occupy. Odier recommended the hind-head; Cheyne the forehead, occiput, and temples; Monro, Quin, and Bader the entire scalp; Portenschlag, in some cases, the whole scalp, in others, the hind-head; Coindet the head, nape, shoulders; Krukenberg the calves of the legs, the abdomen, and arms; Gölis the thighs, legs, and hips. The last-named eminent author dwells at great length on the unsuitableness of all other situations, and expressly states that, in slight cases, the calves of the legs are to be blistered, but in those of a more urgent nature the thighs and upper arms besides!

It is next to impossible to distinguish what situations are suitable and what not, without taking into consideration the character, intensity, and period of the disease. Dr. Klohss deems it sufficient during the second stage of mild cases of hydrocephalus to place vesicatories on the calves and arms, in order to obtain the desired results, namely, derivation from the head and augmented activity of the cutaneous capillaries: but, in severe cases, marked by great stupor, remote blistering is inefficient; and it is necessary to place a blister, of a size suited to the age of the patient, upon the nape of the neck. From this practice he has uniformly witnessed beneficial effects.

In cases symptomatic of enteritic irritation, blisters may be applied with success to the abdomen, calves, and thighs. Should the disease have originated in the sudden drying up of sores, repelled eruptions, and the like, then the immediately adjacent surfaces are the most appropriate for the revulsive medication. He considers blisters to the head as most decidedly contra-indicated in the early stages of the disease; except, perhaps, when an extensive eruption, occupying that region, has all at once disappeared.

"Wherever applied," observes Dr. Klohss, "the raw surface must be kept in constant suppuration for some time, and not too promptly healed. Frequent repetition of the blister being on the one hand less efficacious, on the other fraught with more pain. The occasional excessive irritative action, particularly of large blisters upon delicate, feeble, and highly nervous children, always demands circumspection in their employment, even when sanctioned by the diseased condition and other contingent circumstances. Mathey's advice to incorporate some camphor or opium with the plaster, in order to abate the troublesome effects of the cantharides upon the kidneys, deserves a trial, when these are an

obstacle to their use." (Op. cit. p. 243.)

I have never known even the slightest temporary advantage result from blistering the scalp during the period of encephalitis; but am convinced that the disease is apt to be increased by the irritation. Blisters to the nape of the neck, or to the sternum, as recommended by Dr. Dunglison, while ice or cold water is applied to the crown of the head and warm or rubefacient application made to the feet, will be found the safer practice here. But in the hydrocephalic stage, blistering the scalp, and dressing the surface with mercurial ointment, has been

productive of the greatest good.

b. In croup; here it is of paramount importance that the constitution should have been previously brought "In the latter down by bleeding and evacuation. stages of croup," observes Dr. Porter, "when the lungs are congested, and there is a tendency to effusion within them, there can be no objection to try the application of blisters to the chest, but scarcely under any circumstances will they be found beneficial if applied near to the part affected." (Observations on the Surgical Pathology of the Larynx and Trachea, Dublin, 1836.) Dr. Stokes, too, remarks, "it is a common practice to apply a blister to the throat in this disease, but I have no doubt that such a proceeding is fraught with danger." (Op. cit. p. 218.) The German physicians recommend the application of the epispastic to the superior part of the sternum, as being out of the way of leech-bites, embrocations to the throat, and the like. Lentin

cautions against blistering upon the superior spinous processes of the neck, for fear of inducing sphacelus.

c. In pneumonia; after the inflammatory symptoms have been removed, and in all cases of the typhoid type, blistering, when properly conducted, has the happiest effects. In pleurisy also, after the first week, we may commence with small blisters, and apply them repeatedly over various portions of the affected side. Nothing contributes more powerfully to the reduction of bronchial inflammation than blistering the chest, if the pulse be small and feeble, and blood have been efficiently abstracted at once, in the very commencement of the disease. In quinsy, in like manner, so soon as the momentum of the circulation has been reduced, a blister should be applied to the throat or nape of the neck. A similar treatment is useful in retrocedent cynanche parotidea.

d. In violent cases of infantile jaundice, complicated with hepatic inflammation, the application of a small blister to the region of the liver will often procure signal relief. In peritonitis, after effusion has taken place, advantage will be obtained by keeping up the discharge from a blistered surface by means of mercurial

ointment, according to Dr. Eberle.

e. In erysipelas, characterized by a dilated and atonic condition of the extreme vessels this mode of counter-irritation has been recommended. The blister should be large enough to extend beyond the inflamed part, so as to vesicate a portion of the sound skin. After the plaster is removed, the blisters should be opened, and the surface dressed in the usual way, or with dilute mercurial ointment. Dr. Eberle says that "when the erysipelas is seated on one of the extremities, a blister round the limb, on the sound skin, will frequently arrest its progress in that direction. Blistering is most likely to prove useful when the febrile excitement is moderate, the tongue moist, and the skin somewhat hot

and tense." I have heard M. Lisfranc, of Paris, remark, "that blistering should never be resorted to in erysipelas,

if any gastro-enteritic symptoms be present."

f. In ophthalmia blistering the nape or behind the ears is useful; but has been objected to in scrofulous cases, on the score of its creating pustular inflammation of the adjacent skin, and, consequently, an additional source of general and local irritation; instead of deriving

from the part rather determining to it.

2. In affections of the nervous system, more particularly in cases of spasm and paralysis depending on organic torpor. The common practice of applying blisters to the scalp, in convulsions, is decidedly prejudicial. In those instances, however, which supervene upon the drying up of superficial and discharging ulcerations behind the ears, vesication, either in that situation or upon the nape of the neck, has proved advantageous. In hooping-cough, a disease intimately connected with irritation of the pneumo-gastric nerves, blisters may be applied to the præcordial or interscapular region; and in what is called spasmodic croup, to the

upper part of the sternum.

3. In depraved conditions of the system, especially in certain varieties of scrofula, blisters are indicated. By their derivative agency they obviate metastases to important organs, as the eyes, lungs, &c.; by their counterirritant property they stimulate the sluggish absorbents, furthering the resolution of local obstructions, glandular enlargements, &c.; and by superinducing a new action in the cutaneous capillaries, remove very intractable diseases of the skin. (Hufeland.) In admitting the efficacy of counter-irritation, under such circumstances, it should not be overlooked that the mode in which, and the means by which, it is accomplished require the utmost discernment. Jüngken reprobates the establishment of artificial sources of secretion, inasmuch as they tend to debilitate the patient and favour the progress of scrofula. In inveterate struma, marked by great atony and emaciation, it is assuredly improper to make any additional drain upon the constitution, although, in the commencement of the cachexy, in well-fed, leucophlegmatic subjects, the opening a new pathological secreting surface is not unserviceable. Should we apprehend any mischievous effects from blistering, we may have recourse to the emetic tartar, which powerfully augments the activity of the skin, by producing a crop of pustules.

(Fränkel, Op. cit. p. 11.)

4. In other affections which do not properly come under any of the preceding heads. Dr. Parrish, of America, first pointed out the usefulness of blisters in the cholera of infants. "In severe cases," he says, "much good may be expected from the application of blisters behind the ears. I was led to this practice by observing that the eruption which, during dentition, is apt to make its appearance behind the ears, often proves a most salutary effort of nature; and that, while it continues, the infant generally enjoys an exemption from those dangerous disorders incident to this critical period of life. To imitate nature as closely as possible, the discharge from the blistered surface should be maintained, for some time, by stimulating dressings. I have witnessed the most beneficial effects from this practice, and can strongly recommend it to the attention of the profession." (North American Med. Journ. Vol. II.)

In severe and obstinate cases of diarrhea, recourse should be had to the application of a blister over the epigastrium; as also when the stomach is very irritable, and saline draughts and minute opiates do not give relief.

In infantile remittent fever, if, after the violence of reaction has been moderated, the brain continues to be in an irritated or congested congestion, that is, if much delirium or stupor be present, blisters applied behind the ears, at the same time that cold applications are made to the scalp, will sometimes procure very considerable relief. In infantile enuresis, Capuron recommends blistering the buttocks and thighs.

Application.—In very young children, great irritation is apt to be induced by blisters; and if they be labouring under any morbid condition of the dermoid tissue,-such, for example, as is present in measles or scarlatina, the inflammation, which is of the erysipelatous kind, may terminate unhappily. Hence, as a general rule, blisters should not be suffered to remain on the skin longer than two or three hours. It usually becomes slightly inflamed by this time; and if the plaster be removed, and the part dressed with simple cerate, fresh, and spread on lint, or with a soft warm poultice, a full blister will be raised. The patient is thus saved from much torture during the vesication, as well as in the after stages of the sore. A great improvement, introduced by M. Brettonneau, is the interposing, between the blister and the skin, a single sheet of fine tissue paper, through which the vesicating principle (cantharidine), from its solubility in oil, easily acts; and all the evils which result from the absorption of the cantharides are prevented. Strangury scarcely ever occurs; and it will be found that, in many cases of disease, this mode of blistering may be used at a much earlier period than under the old system.

The continental practitioners, in order to ensure a more diffusive counter-irritation, employ, sometimes, what they term "flying blisters," (vesicatoires volants—fliegende Blusenpflastern;) according to this mode, the blister only remains till it produces a rubefacient effect, a second blister is then applied to some other part, and so on in succession. Quickening the activity of the plaster, by sprinkling its surface with powdered cantharides, is inexpedient for infants. Latour has witnessed sphacelus consequent upon such practice. Indeed, owing to the risk of producing sloughing, gangrene, and death, it is more commonly advisable to dilute the

plaster with some bland cerate.

Should the blistered surface become very irritable, and assume a red, inflamed appearance, either water

dressing or a soft poultice may be applied. Should it, on the other hand, become pale, with ash-coloured spots, and surrounded by dull or livid redness, stimulants must be used.

A favourite lotion with the late Dr. Cheyne was one composed of camphorated spirits of wine and infusion of chamomile flowers (3j. to the 3j.) applied frequently by linen cloths. An excellent mode, when it begins to slough, is to pencil over the part with a solution of nitrate of silver, (gr. x.—9j. to the 3j.,) and then apply a warm poultice, as much pain attends the application. To obviate gangrene fermenting cataplasms are to be employed, and the child, at the same time, supported by nutritious diet—broths, jelly, arrow-root, giving along with them ammonia and quinine. (See some remarks on this subject in the work of Drs. Evanson and Maunsell.)

Although intermittent revulsion be more efficacious than permanent, yet particular instances have been cited in which it is expedient to maintain the discharge from the blistered surface. For this purpose it may be dressed twice a day, with the ceratum resina, unguentum elemi, or, if these prove inefficient, with a salve made with four parts of resinous ointment, and one of powdered savine, the unguentum canthoridis being apt to

excite strangury and vesical irritation.

EMETICS.

It is a physiological truth that the act of vomiting is more easily accomplished, the more elongated the stomach, and the more it resembles the intestines in conformation. Hence, infants, on account of the greater similarity of their stomachs to that of carnivorous animals, vomit with much more facility than old people, the structure of whose stomach inclines more to that of the herbivorous tribes. (Schultz.) This increased aptitude to vomit may be regarded as a wise provision of the author of nature, the great majority of the ills which infancy is heir to, being the result of disordered digestion. Emetics, therefore, constitute one of the most important articles of infantile therapeutics: they are evacuants and revulsives. The first impression made by them being one of diminished power; the second one of equalization: for, after the nausea and vomiting are over, an increased energy is communicated to the nervous and sanguiferous systems, so that the blood is made to circulate more freely through the capillary vessels. And thus it is that emetics promote the functions of absorption and exhalation.

It may be laid down as a general rule that, in cases attended with strong congestion of the vessels of the head, the operation of an emetic is attended with considerable risk of injury; because, during the inverted action of the stomach, the respiration being more or less impeded, as also the flow of blood through the lungs, the right side of the heart becomes gorged and can no longer admit the usual flow from the venæ cavæ; and this obstruction, which is greater with respect to the descending than the ascending cava, is attended

with stasis in the cerebral circulation, as indicated by the unnatural redness of the head, the livid aspect of the countenance, and the turgescence of the jugular veins. Another contra-indication to their use is irritation or inflammation of the mucous membrane of the stomach.

Emetics are administered in infancy and childhood:

1. In order to evacuate the stomach, when oppressed with an accumulation of crude and indigestible food, or morbid secretions, or poisons. Saburral conditions of the first passsages are removed; fits of vomiting, from improper articles of nourishment; and cases of remittent fever, that have come on suddenly after eating some injurious substance or overloading the stomach, cut short by the immediate exhibition of an emetic, followed by an active purge. The noxious matters are removed out of the alimentary canal, before they have determined

permanent irritation.

2. In inflammatory and febrile attacks; in the commencement of these, when to any great extent, there is more or less concentration of vital energy towards some particular part, and the direct effect of the operation of an emetic is to propel the blood towards every organ of the body, to equalize the circulation, and divert it from the "centre of fluxion" as it was termed by the older pathologists. "Innumerable times," says Hufeland, "has a fever, ushered in by convulsions and other signs of disorder, been immediately cut short by an emetic.' In exanthematous disorders, emetics are of great service when the eruption does not appear kindly and equably, but seems restrained and suppressed. In scarlatina they prove useful by removing internal venous congestions, and encouraging a wholesome reaction; antimonial emetics do much good in measles when bronchitis or pneumonia have supervened.

Dr. Eberle is inclined to think favorably of the action of emetics in the early stage of infantile erysipelas.

EMETICS.

In a case, which came under his notice, of an infant only four weeks old, after pretty active vomiting was unintentionally excited by a dose of calomel and ipecacuanha, on the third day of the disease, the erysipelatous affection almost immediately assumed a

more favorable appearance.

3. In inflammatory affections of the respiratory organs. Here their salutary agency is three-fold: 1st, removing gastric complications and other anomalies in the gastro-intestinal functions; 2d, promoting, by their concussive influence, the expectoration of mucous or albuminoid secretions from the air-tubes; 3d, imparting

healthy stimulus to the pneumo-gastric nerves.

In catarrhal fever and bronchitis in infants, when the breathing is oppressed by too copious a secretion of bronchial mucus, nothing affords more certain and speedy relief than an emetic. The action of vomiting rarely fails to free the lungs from the viscid phlegm, that may be lodged in the bronchia and air-cells. (Eberle.)

In asphyxia neonatorum, depending on mucous obstruction of the bronchia, an emetic acts like a charm; removing the mechanical hindrance, and, at the same time, bringing the respiratory muscles and lungs into

play.

But there is no affection of those organs in which emetics prove so beneficial as in croup. Most medical writers, of recent date, concur in this, although they entertain opposite opinions as to the proper time of exhibition. Some practitioners, as Albers, inculcate their employment in the first instance; while others, as Sachse, Jurine, and Formey, regard them as inadmissible until the momentum of the circulation has been reduced by depletion of the sanguiferous vessels. There are cases of affections simulating croup, in which emetics will alone work a cure, as, for instance, bronchial catarrhs, characterized at the commencement by repeated crowing inspiration. Puny scrofulous children, after loading their stomach with food, will, if at all predisposed, often be attacked with incipient symptoms of croup, which an emetic will effectually remove, thus preventing all further mischief. Where, however, croup is formed in full intensity, bloodletting must be premised. Sachse says that "the employing emetics without first subduing inflammatory action, by means of bloodletting in the robust, and by sal-ammoniac or mercury in the weakly, is always prejudicial, inasmuch as the efforts of straining agitate the inflamed parts, and tend to disturb the circulation in the brain." But after sanguineous depletion, emetics are of paramount advantage, when the upper portion of the wind-pipe is clogged with mucus, much of the difficulty of breathing depending on the viscid secretion obstructing the entrance of air into the lungs. The expulsion of this tenacious fluid from the trachea, by the operation of an emetic, not only relieves the distressing difficulty of breathing and sense of choking, but contributes also to obviate the formation of false membrane, by preventing the accumulation and promoting the removal of the coagulable exudation in the trachea. Their tendency, moreover. to equalize the circulation and to promote the cutaneous exhalation furthers the cure.

In cynanche parotidea emetics are occasionally given to clear away the viscid mucus, which, adhering to the palate, tonsils, and fauces, obstructs respiration. In infantile pneumonia, their utility is equivocal. Dr. Seifert says that, "in cases where they seemed to do good after depletion, their effects gave room for presuming that recovery would have followed as readily and certainly without their intervention. (Op. cit. p. 267.)

Much of the suffocative distress, occasioned by hooping-cough, arises from the lodgement of a large quantity of phlegm in the trachea and bronchia; and removal of this obstruction may be gained by the

the exhibition of emetics. They not only effect a beneficial derivation from the lungs, but tend to prevent the recurrence of the paroxysms. They are especially called for in the hooping-cough of infants, whose strength being insufficient to expel the viscid mucus, it sometimes accumulates to such a degree as completely to clog the respiratory passages and to cause death from suffocation. The preferable emetic in such cases, on account of the promptness of its action, is sulphate of zinc. Any pneumonic complication necessarily contra-indicates its

4. In convulsions and spasms, connected with the presence of irritant matters in the first passages, or repletion of the stomach from the child having eaten heartily before the seizure, an emetic will promptly exercise a soothing effect, provided no urgent febrile symptoms nor determination of blood to the brain be present. Richter declares that, in some cases of epilepsy, attended with nausea, flatulence, acidity, colic pains, and other symptoms of indigestion and gastro-intestinal irritation, he has resorted to a course of emetics with entire success.

5. In certain abdominal ailments; in diarrhea, accompanied by loss of appetite and other signs of gastric disorder, ipecacuanha emetics are of marked utility, particularly where the motions are light coloured and slimy, denoting disorder of the biliary secretion. It would appear that ipecacuanha does not act merely as an evacuant, but, by counteracting inordinate action of the bowels and promoting diaphoresis, restores the disturbed equilibrium of function. When the disease is considerably advanced, Wendt deprecates this practice, because, if the child be much exhausted, he may never recover from the shock.

"In cases of colic, attended with frequent watery, green, or curdled and sour stools, antimonial emetics are strongly recommended by Armstrong. When the abdomen is not tender on pressure, and the little patient is free from febrile irritation, an occasional emetic dose of antimonial wine, followed by suitable doses of Dover's powder. In general, however, emetics are not appropriate remedies in infantile colic, except in cases where the morbid excitement is concentrated on the large intestines, and the stomach is in a languid or inactive condition. As a mere palliative an emetic dose of ipecacuanha will sometimes procure considerable relief, when administered during or at the commencement of the paroxysm, by expelling the wind and thus removing the distressing distention of the stomach and duodenum. A repetition of emetics, however, could hardly fail, in the ordinary cases of the complaint, to disorder the digestive functions, and to favour the recurrence of inflammatory irritation in the stomach and bowels." (Eberle, Op. cit.)

6. In the commencement of aphthæ we generally find acrid secretions lodged in the first passages, which a mild emetic removes, thus preventing any irritant reaction upon the mucous lining. But if the affection be already of some standing, vomiting is improper, on account of the then raw and inflammatory condition of the membrane. In stomacace (ulceration of the mouth) Heim zealously recommends the repeated employment of emetics; and certainly, when the breath is offensive, and there is a tendency to nausea and retching, the exhibition of a few grains of ipecacuanha will frequently

do much good.

7. In promoting the functions of absorption and exhalation; hence their utility in struma. Administered occasionally, they remove not merely the morbid secretions which constantly accumulate, but seem also to restore the wonted susceptibility of the stomach, and assist the operation of other medicines. Thus, in cases of scrofulous ophthalmia, when the digestive organs are prominently deranged, the appetite being variable and ca-

pricious, emetics are capable of procuring very considerable advantage. An aqueous solution of tartar-emetic appears to Mr. P. B. Lucas best suited for this purpose, when repeated every third or fourth day, during the active stage of the inflammation. In protracted or chronic cases it rarely proves beneficial. The use of emetics, in the case of delicate sickly children, requires, as already

stated, great circumspection.

In order to render the administration of emetics effective, we should apportion the dose as nearly as possible to the susceptibility of the stomach, which is best done by giving the substance in successive portions, every twenty or ten minutes, till free vomiting ensue. The quantity required for a child is comparatively small, for reasons formerly assigned. In croup, much management is needed with regard to emetics, partly in consequence of cerebral congestion, partly in consequence of the derivative effect produced by the inflammatory irritation. The stomach is often insensible to their action; hence, bloodletting, the application of cold to the head and warmth to the feet, seem to be the best means of restoring its normal susceptibility; and in cases of excessive torpor, sinapisms to the epigastrium. As soon as vomiting is produced it may be assisted by making the child drink tepid water or tepid sugar and water. If there be no recurrence of the vomiting in the course of half an hour, the emetic must be repeated, if deemed necessary.

Should the vomiting become violent, it may be moderated by giving some warm milk and a warm-water enema; and if these fail, a little soda-water, containing a few drops of the camphorated tincture of opium, or the

common effervescing draughts in small doses.

The following are the emetics commonly employed:

1. Ipecacuanha. The powder may be given without the least risk of injury, and generally with much advantage. It is preferable to antimonial wine in the gastric

affections of infants; since it is much less apt to irritate the mucous membrane of the alimentary canal and to debilitate the system; and its secondary effects are in general more salutary in cases attended with an irritable condition of the stomach than those of the latter article. For the dose, see IPECACUANHA.

2. Antimony. When tartarized antimony (antimonii potassio-tartras) is administered as an emetic, it is well to allow the child to suck or drink previously, as it has been found to produce poisonous effects, when taken upon an empty stomach. Professor Hamilton, of Edinburgh, has affirmed that more than one such case has presented itself in his practice. Of a solution, containing one or two grains to one or two ounces of water, from a teaspoonful to a dessert-spoonful may be administered every half hour. Antimonial wine may be exhibited to new-born infants in the dose of four or five drops, to those a month or two old in that of ten drops, and to those somewhat older, in that of a teaspoonful, every quarter of an hour until it take effect. The German physicians sometimes interpose, in cases of croup, the golden sulphuret of antimony, (antimonii oxysulphuretum,) to the extent of one-third or half a grain, so as to keep up a degree of retching. It should never be overlooked that the protracted use of tartar emetic tends to produce a weakened and irritable condition of the bowels which may remain for a long time.

3. Squills. The oxymel (oxymel scillæ) is the only preparation of squill which is admissible as an emetic for infants. A mixture of it and antimonial wine, in the proportion of one part of the latter to three of the former, acts admirably in bronchial affections. A teaspoonful of this mixture should be given every twenty minutes till

free vomiting is induced.

Sulphate of zinc. See Zinci Sulphas.
 Sulphate of copper. See Cupri Sulphas.

6. Tincture of Lobelia. See Lobelia Infl.

I until two or three surtable doses have been smallinged.

Lukewarm water often acts as an efficient emetic, when aided by tickling the throat with a feather.

I subjoin some German formulæ.

R Vin. Antimon., 3ss. Syr. Althææ, 3j. M.

S. A teaspoonful every quarter of an hour, for a child of three or four months.

Wendt.

R Vin. Antim., 3ss. Oxymel. Scillæ, 3ij. M.

S. A teaspoonful, every ten minutes, for an infant at the breast.—Fränkel.

R Pulv. Ipecac., Əss.—Əj. Vin. Antim., 3j.—3iss. Aq. Destill., 3ij. Oxymellis Scillæ. Syrup. Mori, āā, ʒss. M.

S. After being shaken, a teaspoonful every ten minutes to children two or three years old.—Hufeland.

R Antim. Potass.-tart., gr.iij. Oxymel. Scillæ, 3j. Aq. Font., 3jj. M.

S. A tablespoonful every quarter of an hour, for a child of three years of age, labouring under croup.—Sachse.

R Pulv. Ipecac., 9j.
Antim. Potass.-tart., gr. j.
Oxymellis Scillæ.
Syrup. Mori, āā, 3ss.
Aq. Font. 3j. M.

S. After being well shaken, a teaspoonful to a dessert-spoonful every quarter of an hour. (Linctus emeticus Ph. Pauperum Boruss. For children from one to six years old.)

ENEMATA.

By the terms enema, clyster, lavement, is understood the injection into the rectum of a fluid matter; which may penetrate to the ileo-cœcal valve, but never beyond it; distending the corresponding portion of the large intestines, lubricating the surface of their mucous membrane, and quickening their peristaltic action.

Enemata vary in effect according to the quality of fluid employed. Sometimes they consist of simple water, sometimes of alimentary, but more frequently of medicinal substances. Accordingly they have been divided into

simple, alimentary, and medicated.

1. SIMPLE ENEMATA. These differ, in point of therapeutic action, according to the degree of temperature at which they are administered. Water, heated to the ordinary temperature of the body, operates by dilating, in a merely mechanical manner, the cavity of the large intestines, and inducing the necessary contractions for defecation. Accordingly, when the bowels are torpid, and especially when there is great debility, as in typhoid fevers, and in the convalescence from acute diseases, this mild form may be resorted to with advantage.

"The warm-water injection should be administered whenever the infant's bowels are not fully relieved within half an hour after breakfast. In this way a regular state of the bowels is secured, the morbid effects—wind and a thousand others of a loaded bowel—are prevented, and the child is kept in health. As a remedy it is not less efficacious: it has often restored the due secretions of

bile, &c. when calomel itself had failed.

"The proper mode of securing the full effect of the injection is to give a mild aperient over night; this brings

the alvine matters into the last intestine, their natural reservoir; and this is in its turn relieved by the lavement."

(Dr. M. Hall's Notes to Underwood, p. 56.)

The cold-water enema augments, at first, the intestinal contractions, favours very rapid evacuation of fecal matters, and, by constringing the capillaries, urges the blood into the large vessels. It constitutes a useful tonic in relaxed conditions of the pelvic viscera.

- 2. NUTRIENT ENEMATA. Experience has demonstrated that certain alimentary substances, introduced into the lower intestines, with proper precautions, may be absorbed. Thus, in patients in whom the introduction of food is prevented by some affection of the superior part of the digestive tube, life may be supported by injecting milk, beef-tea, farinaceous and gelatinous solutions, yolk of egg. These substances, thus administered, in small quantities at a time, and at the common temperature of the body, are promptly taken up, but are much less nourishing than when transformed into chyme, and assimilated by the intervention of the stomach and small intestines.
- 3. Medicated Enemata. These are well adapted for children as substitutes for nauseous medicines, or when the stomach is too irritable to bear active remedies. They serve to determine a more energetic derivation to the intestinal canal, or to exercise a direct local action on diseased parts.
- a. Laxative enemata. These are especially useful as occasional substitutes for internal aperients, where the necessity of resorting to artificial means for moving the bowels continues a long time; for a protracted and frequent employment of even the mildest laxatives is apt to injure the digestive functions, and to give rise to some degree of intestinal irritation. They exercise an immediately soothing effect in cases of convulsions dependent on accumulations of indurated fæces or worms; they,

moreover, act as refrigerant and antiphlogistic agents, deriving from the superior parts of the body and equalizing the circulation; they further assist as anthelmintics by favoring the expulsion of worms. The simplest form of laxative enema, for an infant, is composed of warm water, containing about a spoonful of moist sugar or manna.

Decoction of chamomile or grnel, with the addition of from a half to two tablespoonfuls of honey, a couple of drachms of soap, from half to one teaspoonful of common salt, or one to two tablespoonfuls of olive oil are often prescribed. The following is a good general formula from Drs. Evanson and Maunsell.

R Dec. Hordei, zv.
Muriatis Sodæ, ziij.
Olei Olivarum, zv. M.

In the case of children more advanced, the enema may be rendered more active by means of senna, jalap, sulphate of potash, of soda, or of magnesia.

b. Emollient enemata. These are useful in cases of local irritation, dryness, and defective secretion, as occurs, for example, in diarrhoea, dysentery, and vesical derangement. They may consist of decoctions of linseed, marshmallow root, quince seed, grits, or milk with oil, but mucilage of starch is most frequently administered. It is prepared by mixing half or a whole teaspoonful of starch with a little cold water, then pouring upon it some hot water, and stirring it about, so as to bring it to a uniform consistence. Half or a whole yolk of an egg may be added with advantage. The enema must always be prepared for the occasion, and should not exceed two or three ounces.

c. Astringent enemata. These, consisting of cold decoctions of galls, tormentilla, oak-bark, and weak solution

of alum, are sometimes beneficial in the treatment of prolapsus of the rectum, passive hæmorrhage from the anus, and serous diarrhæa, unattended with pain or fever.

- d. Tonic enemata. These are resorted to in cases of impending gangrene and great prostration of the vital energies, as in malignant scarlatina and small pox. The best is the decoction of cinchona with camphor emulsion. The cinchona, thus administered, will frequently act with great efficiency as an anti-periodical in ague.
- e. Antispasmodic and anodyne enemata. The former are employed in mild cases of convulsions, colic, and flatulency, proceeding from enteritic irritation. Milk, thus administered, is found to exert a soothing influence in verminous spasms. A drachm or two of spirits of turpentine may be added, if much flatulency be present. Saturated infusions of chamomile flowers, or valerian root, (3ij.—3ss. to an enema,) with the addition of assafætida, (9ss.—9j. see Assafætida) are employed by the German physicians: but in all cases of mere irritation, and more especially diarrhæa, the tincture of opium, in the quantity of from one to four drops or more, according to the age, constitutes a most certain and efficient antispasmodic and anodyne. (See Opium.)
- f. Anthelmintic enemata. Injections of sulphate of iron, (from two to five grains, dissolved in four or six ounces of cold water,) of equal parts of milk and lime-water, in conjunction with aloetic purgatives, of camphorated oil, of salt water, of milk boiled with garlic, (3j.—3ij. to the enema,) have all been recommended for removing ascarides from the rectum. The infusions of valerian root, santonica seeds, (3ij. to the enema,) with assafætida, have likewise been found useful. For convulsions produced by worms, the German physicians speak favorably of the efficacy of milk, valerian, and chamomile enemata.
- g. Acidulated enemata. These are, occasionally, prescribed by continental physicians, with the view of inducing

a powerful derivative effect in cerebral congestion, croup, &c. Wine-vinegar is thus employed, in the proportion of half a tablespoonful for infants, one tablespoonful for children from eighteen months to three years, and double that quantity for those from three to five years. cilaginous vehicle is usually selected for this purpose, as thick gruel; and either a tablespoonful of honey is added to it, or the officinal oxymel, to the amount of one or two tablespoonfuls. Gölis reprobates the practice, because it may determine diarrhoea, gripes, and, according to Treber, convulsions. If the vinegar be strong, these accidents are more likely to ensue; hence the quantity assigned by Autenrieth, namely, a tablespoonful for each year of the child's age, is hazardous. "These derivative clysters" says Fränkel, from whom the above notice is taken, "will, perhaps, act with more effect if administered cold."

The mode of administration deserves particular attention in the case of infants, as mechanical injury has been caused by injections performed in a rude or unskilful The tube ought to be smooth and well polished. A flexible gum elastic tube is perhaps the best. After being lubricated with any bland unctuous substance, it is to be passed a few inches into the gut, in a direction not parallel to the axis of the body, but rather inclined to the left. The latter circumstance should never be neglected, since, with even the best directed efforts, it is often extremely difficult to administer an injection to a child. He no sooner feels the tube enter than he begins to cry, and thereby contracting the abdominal muscles. completely precludes the admission of the fluid. attendant should first endeavour to calm the child, and then propel the fluid by little and little, at repeated intervals, so that it may progressively fill the vacuities without causing painful distention. Even when the lavement is simple, this precaution is proper; for it is always desirable that it should penetrate as far as possible, in order to bring away fecal masses, situated far up; and still more with medicated enema, to ensure diffusion over a wide surface and

speedy absorption.

In reference to the dose it has been computed that it ought to be double or treble of that exhibited by the mouth; because the large intestine is less irritable, and its surface of much more limited extent than the stomach and small intestines.

This relation, however, will only hold good in reference to remedies which act by mere contact with the organic surface, but do not enter the current of the circulation; or whose efficacy, at all events, is independent of it, as is the case with antispasmodics and tonics. Hence, in employing opium, great circumspection must be used, as, in consequence of the rapidity of venous absorption, it may soon produce powerful narcotic effects. In order to secure a more definite operation from medicated enemata, it has been suggested to cleanse out the large intestines, an hour previously, with warm water.

The quantity of fluid required for an enema differs

according to the indications:

1. If it be the intention to stimulate the bowel to contract and evacuate its contents, Frankel limits the quantity, for infants, to two or three ounces; for children from two to five years old, to four or six ounces; and for those from five to eight years old, to eight ounces.

It is observed by M. Guersent, that "the younger the infant the more readily does the intestinal canal dilate, and lose its contractility." He witnessed an instance where the belly of a child was distended to such a degree by the injection of several clysters, which had not passed, that the child was nearly suffocated, and was relieved only by the introduction of a large elastic catheter.

2. Where the object is that the enema should remain and be absorbed, the quantity ought not to exceed two or three ounces at the most.

It is requisite to keep the patient in repose, particularly

if the enema be somewhat stimulant, as movement, by multiplying the points of contact, will tend to excite the contraction of the intestine and counteract the result.

BATHING.

Bathing is the immersion of the body, or a part of the body, into a medium different from the ordinary atmosphere. The skin is one of the most extensive and important emunctories of the human body. Through its countless pores a large portion of the redundant elements of the body is continually passing; consequently, whatever interferes with its regular action, or impedes the free elimination of the perspirable matter of the blood, becomes a source of more or less serious disease; and, on the other hand, whatever tends to maintain the due exercise of its functions contributes very largely to the preservation of a healthful condition of the system.

In infancy, the skin is soft and delicate, highly vascular, and susceptible of external impressions. If at this period ablution be neglected or inadequately performed, particles of perspirable matter, says Dr. Eberle, together with the dust which settles on the cuticle, insinuate themselves into the pores, and spread a film of impurities over the whole surface. This not only interferes with the regular process of the cutaneous transpiration, but tends, moreover, in no slight degree, to disorder the healthy structure of the cuticle and cutis, and ultimately to give rise to protracted constitutional maladies, and dangerous epi-

demics. By a habitually unclean state of the surface children are predisposed to acute and chronic eruptive affections; the general health is liable to be impaired; and indigestion, and other forms of gastric and intestinal disease, to be called into activity.

The water-bath is that generally employed for children; and it constitutes not only an important measure of hygi-

ène, but a valuable remedial agent.

TEMPERATURE OF BATHS.

The temperature modifies the physiological and therapeutic action of the bath. Accordingly, a conventional classification has been made on this principle. The subjoined, taken from Dr. Forbes's excellent article on Bathing, in the Cyclopædia of Practical Medicine, is the best I have met with:

- 1º. The cold bath, from 33° to 60° Fahr.
- 2°. The cool bath, .. 60°.. 75°...
- 3°. The temperate bath, 75°.. 85°.
- 4°. The tepid bath, .. 85° .. 92° ...
- 5°. The warm bath, .. 92°.. 98°..
- 6°. The hot bath, ... 98°...112°...

The two extremes are inappropriate for young children.

As regards the influence of temperature upon the salutary effects of bathing, it may be observed, that tepid and warm baths, are those best adapted for infancy. These excite the exhalent and absorbent functions of the cutaneous organ, equalize the circulation, soothe irritation, allay pain, induce rest, and promote crisis by the skin and kidneys. Infants readily lose their temperature, and are slow of regaining it. The faculty of producing heat being lower in the young animal than in the adult, as

deduced from the beautiful experiments of Mons. Edwards, it may be reasonably supposed that the younger the child the more hazardous is any sudden and extreme deviation from the normal temperature. Indeed, the power of infants in resisting cold should never be tried: such trials almost always issue in absolute debility, and this in an impaired state of the functions of digestion, nutrition, and growth. Consequently, the custom which has prevailed in some countries of plunging the new-born babe into cold water, in order to render it hardy and robust, should be denounced as the ruthless practice of a barbarous age and unenlightened people. If the vigorous bear such a trial,

the feeble or delicate sicken or sink under it.

As a general rule, the temperature of the bath ought to be about 96° or 98° Fahr., for the first ten or twelve days; as being most congenial to the physical habits and sensibility of the infantile system. Afterwards it may be used a little cooler; because warm bathing, by its tendency to over-excite the exhalents of the skin, is apt to produce a state of general relaxation and languor unfavorable to the due performance of the vital functions, and to predispose very strongly to the injurious influence of cold. Children who are often bathed in warm water are highly susceptible to the impression of low temperature, which renders them much more liable to catarrhal and other affections, from exposure to the open and cold air, than those who are habitually bathed in cool water. Until the end of the third year, the bath ought to be tepid: and, for feeble and sickly children, it will be proper to continue the use of tepid water for this purpose to a more advanced age. Its tonic effect may be augmented by the addition of bay-salt and by much active rubbing. When the child is healthy and vigorous, however, the tepid should be gradually substituted for the cool bath after the third year; though injury, as Dr. Eberle judiciously observes, is probably much more frequently done by too

early a transition to the cool, than by too long continued

use of the tepid bath.

An excellent kind of bath is a shower-bath of great simplicity, recently brought into use. "It consists of a tin vessel, in the form of a large bottle, pierced at the bottom like a cullender, and terminating at the upper part in a narrow tube: when put into water, it becomes filled with this fluid, which is retained by placing the finger upon the tube: on removing the finger, the water flows out gradually." (Dr. Hall's Notes to Underwood, p. 22.)

Baths for children may consist of water alone, or of

water impregnated with extraneous substances.

1. SIMPLE WATER BATHS.

By the use of the *tepid* bath, the cutaneous exhalents are gently stimulated, while the genial temperature of the water produces, through its influence upon the cutaneous nerves, an agreeable and wholesome excitement through the whole system. The *warm* bath determines a further dilatation of the cutaneous exhalents, a softening of the cuticle, and an accelerated circulation: of these, diaphoresis is the natural consequence.

The tepid and warm bath may exercise a sorbefacient, refrigerant, tonic, and sedative or antispasmodic agency. From the experiments of Marcard, it appears that a bath about 90° is most efficacious in retarding the pulse, lowering morbid heat, relieving pain, and removing any irre-

gular or convulsive affection.

Baths are employed—

a. As a measure of cleanliness. Tepid bathing not only cleanses and softens the skin, but imparts vigour to the muscles: these beneficial effects being traceable to the influence of the process upon the circulation and secretions. Ablution is essential where any acrid discharge is likely to produce galling or excoriation, and to remove the viscid tenacious scurf adherent to the infant's skin at birth. (A mixture of soap and water, with the addition of a small

quantity of spirits, will be found to answer the latter purpose better than simple water. It should always be of a pleasant warmth.)

b. According to Mons. Edwards, the momentary immersion of a great part of the body in warm water, (probably about 100° Fahr.,) is frequently an efficacious means of reanimating a child just born without signs of life. As soon as motion is produced, or if it be slow in manifesting itself, it will be right to abandon a method, the prolonged use of which would be fatal. The excitement of the surface may be kept up by friction with dry warm flannel, and when respiration is fairly established, the child may be put in Mende recommends, after removing all mechanical obstructions, as mucus from the mouth, to place the child in a bath at 95°, along with the placenta, (provided it be already separated,) without dividing the funis; since prolonged union therewith contributes to quicken the vital powers. The head must be held, meanwhile, in an elevated position, to prevent the water entering the mouth or nostrils. The bath, besides stimulating the vascular and nervous systems, has this advantage, that it resembles the mode of uterine existence, counteracting for a time, the cooling influence of the atmosphere upon the surface of the body. To render the bath more active, an eighth or tenth part of wine, or a few drops of oil of rosemary, may be added. All the while the head, chest, and spine should be diligently rubbed with the hand, and the body moved gently backwards and forwards.

c. In inflammatory affections of the brain and its membranes, the French and German physicians frequently employ the warm bath, immerging the whole body; while ice is applied to the top of the head. I am inclined to believe, however, that more benefit may, in general, be derived from merely placing the inferior extremities in the bath; for the tendency of general immersion in the warm bath to increase the flow of blood to the head is always very

considerable; whilst the application of warmth to the inferior parts of the body often exerts a powerfully derivative effect upon the turgid vessels of the brain. In cases where the cerebral symptoms, however, are those of compression, and have arisen in a child much debilitated by depletion, the active application of hot cloths to the head will be found of signal service: cold aggravating the mischief. (Evanson and Maunsell.)

- d. In exanthematous disorders, in order to promote the development of the eruption and the crisis by the skin; more particularly when the crisis is interrupted or suppressed. It is obvious that, at the commencement of the disease, when inflammatory symptoms run high, warm bathing is improper: the redness, heat, and febrile irritation would be augmented by the adventitious warmth. But in cases where the eruption has retroceded, and the sensorium is attacked and meningeal inflammation impends or where cramps and convulsions arise from nervous irritation, a mild bath will prove of decided advantage; conjoining, in the case of cerebral disorder, cold applications and affusion over the head. In the convalescence from this class of affections, when the skin is dry and harsh, but no other functional derangement or fever present, a bath of from 90° to 95° may be resorted to with benefit. (Frankel.)
- e. In cutaneous disorders of a chronic kind. Morbid conditions of the surface are sometimes manifestations of internal disorder, but at other times consist wholly of sluggish or irregular action in the superficial vessels of circulation or secretion. The warm bath proves remedial in the papular, vesicular, squamous, and pustular forms of eruption, by exciting these vessels to new or more vigorous action.
- f. In infantile remittents, when not violent, the daily employment of the tepid bath is calculated to do considerable good, by relaxing the skin and allaying irritation. It should be used during the febrile exacerbation, and

the child must not be suffered to remain in the bath longer than about ten minutes.

g In scrofula and rickets, where the constitution is feeble and enervated, the warm bath acts as a tonic and sorbefacient; more particularly the warm sea-bath.

h. In convulsions, the warm foot-bath (the water being as warm as can be borne without injuring the skin) is a most beneficial revulsive; particularly adapted to afford relief in convulsions excited by the irritation of difficult dentition. The good effects of warmth are always much enhanced by cold applications to the head. While the feet and legs are immersed in warm water, a piece of flannel, wet with cold water, should be constantly applied over the head and temples. (Eberle.)

- i. In various affections of the abdominal and pelvic viscera, the utility of tepid or warm bathing, in tranquillizing the nervous system and quickening the functions of the skin, is most conspicuous. As a local emollient and general sedative, it is a valuable adjuvant in peritonitis; as also in infantile cholera, when the skin is dry and harsh, and the pulse quick and irritated. While the little patient is immersed in the bath up to the neck, a napkin, moistened with cold water, should here also be laid upon the head, in order to lessen the determination to the brain. In protracted diarrhea attendant upon dentition, where, after various remedies have been tried in vain, the child has lost flesh and strength to an apparently hopeless degree, recovery has been brought about by the simple use of the warm bath. (Henke, Kinderkrankheiten, Th. i. s. 249.) In cases of vomiting, nervous colic, and dysuria, tepid bathing has been found effectual. The unusual occurrence of vomiting, however, should lead us very carefully to watch the head: it is not unfrequently premonitory of hydrocephalus.
- k. In inflammatory affections of the air-tubes and lungs. Dr. Seifert reckons warm bathing a most important auxiliary in the treatment of the advanced stage of infantile

pneumonia, not as a means of palliation only, but of cure. Judiciously employed, it tends to counteract or remove sanguineous infiltration and consolidation of the pulmonary tissue. The salutary effects may be ascribed on the one hand, to the powerful derivation of blood from the central organs and vessels to the surface of the body; and, on the other hand, to the increased action of the cutaneous exhalents, favouring internal absorption. the use of the bath, the morbid irritability and sensibility of the little sufferer abate materially; the cough becomes looser and less frequent, the breathing freer, and he falls at length into a calm refreshing sleep." (Op. cit. p. 288.) To obtain these good effects, the bathing must be often repeated, (at least twice in the day,) and steadily persevered in, until a decided change for better or worse declare itself. The bath should be heated to the pitch of 95° or 98° Fahr.; the air of the apartment must not be under 65°. The infant ought to remain in the bath as long as possible; never less than fifteen or twenty minutes. Horn thus expresses himself, in reference to the same affection, (Üeber die Erkentniss und Heilung der Pneumonie, s. 225,) "Many children, whose case seemed hopeless, have been indebted to this means [warm bathing] for their life. Its employment procured a remarkably happy effect." "One must have seen to credit the marvellous and sudden alteration induced by the use of this remedy."

As a general rule, the warm bath is inadmissible in acute inflammation of the chest, before the system has been reduced by depletion; more especially where the child is of a full habit. The pernicious results emanating from the indiscriminate employment of warm bathing appear to have led some writers to discountenance altogether the practice. Billard cautions us against immersing children labouring under pneumonia in warm water; inasmuch as the heat and pressure of the fluid augments the flow of blood towards the thorax and the difficulty of breathing! Joseph Frank states, "Quamvis Hippocrates illa (balnea)

suaserit, attamen nunquam ausus sum, peripneumonicos balneo committere." (A Seifert cit. p. 284.)

i. In induration of the cellular membrane and skin, (skinbound, scleroma,) the tepid or warm bath has been favorably mentioned by some German writers, but is much less beneficial than dry warmth or vapour. "The aqueous vapour bath is decidedly the most valuable remedy that has hitherto been recommended for the cure of this affection. As soon as the disease makes its appearance, the infant ought to be subjected to the vapour bath; and this should be repeated every three or four hours, until the skin becomes moist and soft, and the tightness and hardness have disappeared. The heat of the vapour should not exceed 105°; the most comfortable and salutary temperature being from 98° to 100° When the child is taken out of the bath, it should be wrapped up in warm and dry flannel, and laid in its bed."....." If no suitable apparatus for applying the vapour be at hand, the infant should be laid in its bed, and hot bricks, wrapped up in wet pieces of flannel, placed a short distance from its body under the covers, supported by hoops or some other contrivance, so as to leave a free space for the accumulation of the vapour." (Eberle, Op. cit. p. 166.)

2. MEDICATED BATHS.

These consist of water impregnated with various extraneous substances. Whether the skin, in a state of integrity and health be capable of absorbing from an aqueous menstruum, is not fully established. The experiments of Séguin, Currie, and Rousseau, go to prove that little efficacy can be fairly ascribed to medicinal baths, (be the impregnation natural or artificial,) beyond that derived from temperature, applied in a liquid or ærial form: while those of Bradner Stuart and Westrumb lead to an opposite conclusion.

"In diseased conditions of the cutaneous organ the case is different, because, in most instances, the actual skin,

and therefore the mouths of the absorbents, are brought into contact with the material employed—the epidermis or scarf-skin being broken down, in several points, by the morbid action going on upon the surface; and when these cutaneous derangements happen to be manifestations of internal disorder, the impregnated bath may prove of service in two ways; 1st, by exciting new actions in the superficies of the body; and, 2dly, by so influencing the general frame, as to subdue the force of the morbific process, whence had emanated the disease of the skin." (Enc. Metropol. art. "Bathing.")

The relative quantity of impregnating matter depends in general on the amount of liquid required and the effect intended. For a bath, for a child of ten years old, from 36 to 48 gallons; for a child of from two to five years from 18 to 30 gallons; and for an infant about 18 gallons of water may be used. The following medicated baths have been resorted to in the treatment of the diseases of early

life:

1. Saline baths. Warm salt-water bathing is one of the most powerful means of relieving abdominal congestion, stimulating and improving the functions of the skin, and imparting tone and vigour to the system at large. It is employed,

a. In scrofulous cachexia, marked by a languid state of

the cutaneous capillaries.

b. In chronic eruptive disorders of long standing, or associated with constitutional atony.

c. In glandular obstructions and enlargements.

These saline baths are prepared by adding common salt to water. The proportion for a bath, for a child of three years, is half a pound; for a child of five years a pound; and for children more advanced two pounds. To procure the full effect, the individual should remain not less than twenty minutes in the bath. The temperature ought not to exceed 92°, otherwise it will prove too stimulant for the skin.

- 2. Sulphurous baths. Water, impregnated with sulphuret of potassium, in the proportion of half a drachm to the gallon of water, exercises stimulant and alterative effects. It has been recommended by M. Biètt in eczema, psoriasis, and lepra; by MM. Jadelot and Guersent in struma; and by M. Baudelocque in chorea. In the last named disease, Dr. P. H. Green assures me that it is an efficient remedy.
- 3. Alkaline baths. These impart stimulus and tone to the cutaneous organ, relieve spasm, and promote the functions of absorption and secretion. They have been of utility in chronic affections of the skin, especially those of a strumous description; in scrofulous mucous discharges; in induration of the lymphatic glands; in spasmodic disorders, as the tonic cramps and convulsions of infants; and, according to Dr. Ryan, in congestion of the brain and lungs.

Alkaline baths are prepared of soap, the carbonates of

soda and potash, or the solution of hydrate of potash.

The saponaceous baths act mildly but efficiently, and are preferable in the above-mentioned affections of children, as they do not irritate the skin. We may reckon to a bath, for a child of two or three years, a quarter of a pound, but for an older child half a pound of soft soap.

The baths, containing the carbonated alkalies, will be found advantageous, when it is the intention to make a more powerful impression on the nervous system, as in cases of convulsions, or when extreme danger is impending from metastatic affection of an important internal organ, caused by suppression of the normal transpiration, or some affection of the skin or adjacent textures. The quantity of the carbonate of soda is from half an ounce to six drachms, that of the hydrate of potash from a drachm to a drachm and a half, to each gallon of water: care must be taken that none gets into the child's eyes, as it might create severe inflammation.

4. Metalline baths usually consist of water impregnated

with the scoriæ of metals. The most common and esteemed of this kind are those prepared with the scoriæ of iron. They are said to strengthen and brace the part to which they are applied; and are employed by the German physicians in the treatment of scrofulous and rickety children, in conjunction with vegetable aromatics and tonics, after a course of alteratives. Against nightly incontinence of urine, they have produced a perfect cure when all other means have failed. (Tourtual.)

Ferruginous baths may be promptly prepared with muriated tincture of iron, or sulphate of iron. Of the former, about half an ounce may be diffused through every ten gallons of water; of the latter about two drachms.

Baths of malt, of bark, of various aromatic drugs, have been particularly mentioned by foreign authors. They are employed in cases of debility, atrophy, scrofula, rickets. &c.

GENERAL RULES TO BE OBSERVED IN BATHING CHILDREN.

1. The most suitable temperature for baths, in a remedial point of view, is between 90° and 98° of Fahrenheit. As a dietetic habit, baths for children, upwards of twelvemenths, need not be so nicely regulated. The tepid bath is preferable in winter, the cool bath, (of the temperature of the river water in the hottest days) in summer.

2. The proper time for bathing is not when the stomach is full, but about two hours after breakfast or dinner. Infants should not be put in the bath, after having been

freely nourished at the breast.

6. The child should never be made to enter the bath when in a state of free perspiration from exercise, or on

awakening from sleep.

4. As a measure of hygiene, the time which it may be proper to remain in the bath must be varied according to

the age of the child. For the first four or five weeks the infant should not be kept beyond two or three minutes in the bath—and the duration must afterwards be gradually prolonged, as the child advances in age, until it extends to twelve or fifteen minutes—a period which a child may, with propriety, be allowed to spend in the bath after it has attained the age of four years. Where bathing is employed as a therapeutic agent, the sojourn may be prolonged.

"In using the bath," says Dr. Eberle, "the child's body ought to be immersed up to the shoulders or neck. The practice of immersing only the lower half of the body in the bath is objectionable. The upper part of the chest being wet, and exposed to the cooler temperature of the air, generally feels chilly or uncomfortably cold, while thus

partially immersed in the tepid water."

- 5. On emersion, the general surface, and especially the feet, should be rubbed, not only until they are perfectly dry, but until they glow with warmth. After this the child may be put to bed. Nothing is more apt to predispose to the injurious effects of cold than warm bathing. "In that general tendency to increased perspiration, which is produced by the tepid bath, every draught of air, and especially the sudden removal to a cold atmosphere, is peculiarly apt to give rise to catarrhal and other febrile affections." (Struve.)
- 6. Hot bathing is improper in those conditions of the frame which are marked by plethoric fulness and local congestion.

COLD.

In employing cold as a remedial agent, we must accurately distinguish its proximate or *physical* effects from its remote or *physiological*. The former are of a sedative,

the latter of a stimulant, nature.

To the proximate effects belong the impaired sensibility, the contraction of the vessels, the retarded respiration, and, in a word, the diminished energy in all the vital manifestations resulting from the continued impression of cold. It is true, indeed, that its instantaneous action on the living tissues is directly excitant, as seen in the local

redness and tumefaction; but this is fleeting.

The remote or physiological effects are those of reaction, supervening at the moment of cessation, and commensurate with the intensity of cold, the suddenness or slowness of its development, and the time of its duration; it being a law in the animal economy, that increased action follows temporary suspension. All the organic functions which experienced at first the depressing influence of diminished temperature, not only recover their wonted strength, but acquire fresh vigour; increased vivacity is displayed in the sentient system; the contractile force of the heart is augmented, and a kindly glow diffuses itself over the whole frame. The intensive amount of this reaction will vary according to the circumstances above pointed out, and to the susceptibility and power inherent in the part and in the constitution at large.

GENERAL RULES FOR THE APPLICATION OF COLD.

The proximate effects of cold are available in subduing morbidly increased sensibility, with simultaneous diminution of irritability, augmented heat of the surface, and

vascular tension. These may be obtained by exposure to a current of air, by the application of water (liquid or solidified), or by certain chemical mixtures which tend rapidly to absorb heat from the body with which they are in contact.

The remote effects of cold are useful in imparting tone and vigour to the constitution, in debilitated states of the lymphatic and nervous systems; as in paralysis and various chronic affections. They succeed a more or less sudden impression of cold, as that produced by affusion or immersion.

The employment of cold is, on the other hand, contraindicated in plethora or thoracic and abdominal inflammation, from its tendency to cause internal congestion; and in extreme feebleness and prostration.

A. AIR.

The salutary influence induced by exposure to cool air is especially felt in inflammatory conditions of the surface of the body and in nervous disorders. To the former belong more particularly those exanthematous diseases to which children are so prone. In small-pox, free exposure to a cool pure atmosphere allays morbid sensibility, counteracts dangerous metastases, and hastens recovery. Hence the patient ought to be placed upon mattresses, with but few bed-clothes, in a spacious, well-ventilated chamber, moderately heated in winter only. When severe headach, urgent fever, and numerous pustules are present, a stream of fresh air should be allowed to enter by the window; or, if the season be favorable, the patient may be carried into the open air for an hour or two in the day. Nothing can be more insalubrious, under such circumstances, than sick rooms warmed by close stoves, which necessarily preclude adequate ventilation. Such procedure may be likened to the smothering system which formerly prevailed in the treatment of this and congenerous diseases. During the period of desiccation, it is advisable to limit somewhat

COLD. lxiii.

the access of cool air. As a matter of course, all exposure

to cross draughts must be guarded against.

In measles, in like manner, the surrounding atmosphere ought to be kept at a moderate temperature; but positive, and particularly humid cold must be avoided, as being injurious in inflammatory affections of the mucous membranes of the air-passages, from its tendency to suppress perspiration. The best temperature is about 64° or 65° Fahr. The risk of catching cold is most-certainly obviated by confining the patient, as Sydenham recommends, lightly covered in bed. In scarlatina, the cooling plan is indispensable; but, during desquamation, on account of the exalted sensibility of the cutaneous organ, cold is rather prejudicial. (Fränkel.)

In various nervous maladies characterized by debility, and in the convalescence from acute diseases, the stimulant

and tonic effects of pure country air are indisputable.

B. COLD WATER.

Water, being a denser medium, transmits the impression of cold with more intensity, and is proportionally more efficient than air in reducing animal heat. Its physiological and therapeutic effects differ according to the mode of employment and the temperature.

1. Ice and iced Water.

a. INTERNAL ADMINISTRATION.

Certain German physicians recommend the exhibition of ice or iced water, as a means of allaying verminous irritation in children, when marked by urgent vomiting, colic pains, spasms of the stomach, and other gastro-intestinal symptoms. Löffler prescribes, under such circumstances, pellets of ice, to be swallowed every five minutes until relief be procured. (Fränkel.)

b. EXTERNAL EMPLOYMENT.

The continuous application of ice or iced water affords a most powerful means of lowering temperature, subduing increased action, and counteracting serous or lymphatic exudation in inflammatory affections within the head. Hence, in cases of meningitis, whether idiopathic or the result of translation from some other part of the body, as occurs in scarlatina, accompanied with coma and delirium, the continued application of cold to the scalp is an invaluable auxiliary to the antiphlogistic plan of treatment. Romberg recommends, in the effusive stage, the alternation of cold with warm, moist, aromatic fomentations; continued, if need be, for two or three weeks. The exact time at which these are expedient is difficult to ascertain; but, as a general rule, they may be resorted to when cold alone ceases to be of use. Purgatives, and frictions with tartar-emetic ointment, should be used in conjunction. Four cases are detailed, in evidence of the author's successful practice. In other forms of internal phlegmasiæ attacking infants and children, the utility of such powerful refrigeration is very equivocal. Its injudicious employment has even proved detrimental, by giving rise to sloughing, induration of the affected part, and fatal metastasis. In hemorrhage and traumatic inflammation, cold applications are advantageous equally in early and adult life.

A convenient mode of applying cold is by means of pounded ice enclosed in a cloth or bladder. The bladder is preferable, as it excludes moisture, retards the process of liquefaction, and from its smooth and pliant nature readily accommodates itself to any unevenness of surface. The best kind is a well-cleaned pig's bladder, about half filled with broken fragments of ice. If cloths be used, they must be of adequate size to cover the affected part, (viz. in cases of head affection, the entire shaved scalp,) and doubled, to prevent their getting rapidly warm. They ought also to be renewed frequently; that is, according to cir-

COLD. lxv.

cumstances, from every five minutes to a quarter of an hour. There ought to be a pail of cold water constantly at hand, so that, as soon as one cloth has done its duty, another may be ready to replace it. The water may be kept at a low temperature by the addition of ice. If neither cold water nor ice can be procured in sufficient quantity, then recourse must be had to refrigerant mixtures. Of these, Schmucker's is very famous in Germany: it consists of a solution of sal ammoniac and nitre in vinegar and water, (Aq. commun. Acet. Vini, to. iv.; Potass. Nitratis, Zxvj.; Ammoniæ Hydrochloratis, Zviij.) A solution of common salt in vinegar and water has also been recommended, but is far less efficient than the preceding. The vinegar is objectionable for children, on account of its sharp penetrating smell. An elegant mode of reducing temperature is the repeated dropping of sulphuric ether upon the temples or scalp. The cold generated by its rapid evaporation is usually so intense as to awaken a patient from even lethargic stupor.

2. Water under 75 Fahr.

a. Cool Sponging.

This is a convenient and grateful method of moderating febrile heat of the surface, provided undoubted powers of reaction be present in the system. It is well adapted to exanthematous diseases, as measles, scarlatina, small-pox; to remittent or other fevers, attended with dry heat of skin, much arterial action and nervous excitement. Of the first class, the pure inflammatory form of scarlatina, is that in which cool sponging affords most decided benefit, when general and topical abstraction of blood and other antiphlogistic measures have failed in relieving the urgency of the fever, the heat, the agitation, and sleeplessness. Vinegar and water may be used, for this purpose at first tepid or cool, but afterwards cold. As a general rule, the

more arid and pungent the heat of the surface, the more cogent the necessity for the application of the cold, and the more frequently and fearlessly ought it to be renewed; every hour or half hour being not too often. Should the child fall asleep during the process, and begin to perspire, it must be intermitted, but resumed again on a recurrence of the parching heat (Fischer, Behandlung des Scharlachfiebers; and Henke, Kinderkrankheiten.) Römhild pretends to have discovered a prophylactic against the above disease in frequent cold ablution. In small-pox, Hoffmann and Hufeland speak favorably of the efficacy of repeated sponging of the face with cold water, in repressing the formation of pustules. In chronic cases of strumous ophthalmia, sponging the head and neck every morning with fresh water; using it at first of an agreeable temperature, and making it cold by degrees, particular care being taken to dry the head well afterwards, will be found of the greatest advantage, according to Mr. Wardrop. In inflammation of the gums consequent upon dentition, Wiegand enjoins their being frequently washed with cold water. Although not exactly in place, it may be mentioned, that cold aspersion over the abdomen has proved useful in infantile asphyxia; and over the hypogastrium in retention of urine, by exciting the bladder into action.

b. COLD AFFUSION,

Is a powerful stimulant and tonic: the operation upon the sentient system in the first instance, and the subsequent excitement of all the vital functions in the second, being those circumstances to which the good is mainly attributable With the exception of the shock of the water, the identity is perfect between it and humid cold applied in other ways. It is resorted to in the following affections:

1. In acute hydrocephalus, when not arrested in its course by the ordinary antiphlogistic measures, Heim, Formey, and many other practitioners have attested its utility. By its direct action, morbid heat and vascular con-

COLD. lxvii.

gestion are removed; and, by the consecutive energy imparted to the nervous and sanguiferous systems, the absorption of effused fluid is promoted. According to MM. Parent and Martinet, however, it is only available in the first period of the malady. In the second, when there is slowness of pulse with slight rigors, it is useless or hurtful.

Cold affusion, to be efficient, ought not to be left off too soon. By steady perseverance for two, three, and even more days, some apparently desperate cases have been recovered. Heim mentions an instance where a child's life was saved by continued affusion, no less than 1860 gallons of water having been employed!

No age, however tender, ought to be regarded as a ground of exemption against its use. The eminent physician last named treated an infant hardly a month old with perfect success, (Vermischte Schriften, von Pätsch, 1836.)

In chronic hydrocephalus, cold affusion is said to act as a powerful sorbefacient. Heim has recorded a remarkable example of a child that was cured after a three years' course!

- 2. In croup, the employment of cold affusion has been strongly recommended by Harder and other German physicians. The cases, however, in which it was resorted to appear not to have been the inflammatory, but the so-called "spasmodic croup." There it may prove beneficial by resolving spasm of the glottis.
- 3. In exanthematous diseases. The value of cold affusion, as a means of abating heat and thirst in scarlatina, was first pointed out by Dr. Currie; who restricted it to those cases where the bodily temperature is considerably elevated, and the arterial system is in strong action, without local inflammation. The safest and most advantageous time for its use is when the exacerbation is at its height, or immediately after its declination has begun. M. Guersent has seen it productive of good in measles when

complicated with cerebral disturbance; where bronchitis was present, it was not aggravated.

4. In the treatment of poisoning, by opium and other narcotics, cold affusion is an efficient auxiliary. See

OPIUM.

Application. If it be the intention to influence the brain, we may proceed as follows: the child, having his scalp previously shaven, and his neck and shoulders covered with oil-cloth, is to be placed in a bath or tub; and, while one assistant is supporting his head, another is to pour a stream of water upon it in such wise that it shall flow backwards, and not over the face, from a moderate height. The water may be used at first tepid. The operation should be renewed every hour or two hours, without ceasing day or night, until the morbid symptoms be subdued; provided there be sufficient power of reaction and no feeling of internal cold. For general affusion, the patient may be partially immersed in a bath of a temperature of 90° Fahr. The stream of water ought to be directed first of all to the occiput and back. After each affusion, the body is to be promptly dried, enveloped in a blanket for ten minutes, and then put in bed. The above mode of procedure is well suited to cases of eruptive fever; the tepid bath not only attempering the unpleasant sensation of the cold, but also equalizing the circulation and favoring kindly development of the rash.

c. Plunge Bath.

This, like the cold affusion, is a powerful stimulant and tonic; but professional men should be very circumspect before they adopt the use of so energetic an agent, not only as regards infants, but persons farther advanced in life.

It is in cases of general atony, not accompanied with much irritability, that cold bathing is indicated; provided adequate reaction succeed the first shock. Where no genial glow, but a feverish chill, with a small frequent COLD. lxix.

pulse, follows, and the functions of internal organs, and more especially those of digestion, be in a healthy state,

it is essentially prejudicial.

In the convulsions to which children are so liable, Dr. Currie found cold bathing a most useful remedy, whether the convulsions originated in worms or other causes. In early infancy, however, he remarks, "that he has used it with much caution, sometimes tempering the water when the weather was cold, and avoiding the remedy entirely in all cases where the vital energy seemed much exhausted." He further remarks, "that the chief benefit derived from the cold bath in convulsive diseases, depends on its being used in the paroxysm of convulsion. It not only shortens the duration or abates the violence of the fit, but has a remote good effect in retarding or wholly preventing its return." In that convulsive disorder, termed chorea, M. Dupuytren recommended the practice of brisk, short, and reiterated immersion in cold water.

In scrofula and rickets, characterized by general debility and languid absorption, the tonic and sorbefacient effects of cool, and, more especially, of sea bathing, are happily combined for invigorating and calling into activity the energies of the constitution. Prior to its adoption, in the case of delicate children, the tepid bath should be employed, after which the transition to the open sea, in the middle of a summer's day, will not be too abrupt; the water being often heated to 70° or more, on a favorable coast. the mild and equable temperature of the sea, on the one hand, and to the stimulation of the cutaneous pores on the other, that its virtues, in improving the functions of digestion and nutrition and strengthening the muscular fibre, are chiefly due. The infant, on emersion, should be received in a blanket, and wiped dry with a cloth in the most expeditious manner; and, as soon as it can be dressed, should partake of such exercise as may be suited to its age. There will be no need of its being made perfectly dry, as a child will be less apt to take cold from a few drops being left upon it, than by being long uncovered in some parts of its body, in an over caution to wipe it dry; the refrigeration of the surface being retarded by the slow evaporation of the salt water, and by the greater moisture of the sea-air.

In subjects of a very fair complexion, the salt water occasionally determines an erythematous blush over the chest, back, and limbs; which is attended with heat and itching, and lasts from three to seven days.

The best seasons of the year for bathing in the sea are the summer and autumn, and the best time of the day

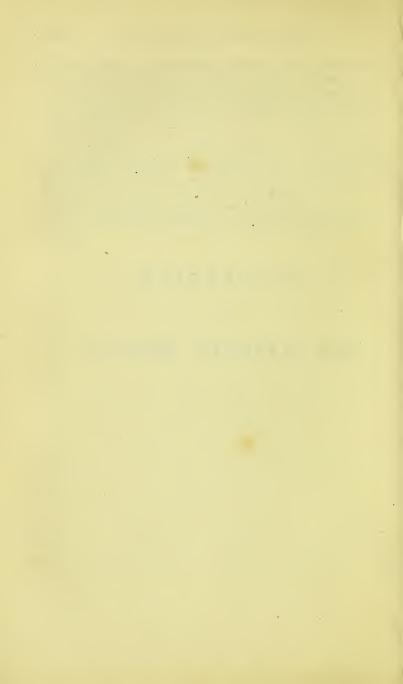
is noon.

A

COMPENDIUM

OF

THE MATERIA MEDICA.



A COMPENDIUM,

&c.

ABSYNTHIUM. ARTEMISIA ABSYNTHIUM, or Common Wormwood, possesses a slightly bitter aromatic taste; and a peculiar strong odour, which is apt to disorder the head of certain individuals. It is said to have both stimulant and tonic properties, the former depending on the presence of volatile oil. Its use is therefore contraindicated during inflammatory states of the bowels. Its unpleasant taste is very offensive to children; and hence it is seldom employed except as an anthelmintic. The root of the artemisia vulgaris, formerly recommended by Burdach, for the cure of epilepsy, has been lately given with success in eclampsia infantum (fits) at the period of dentition. The dose is ½ a grain, gradually increased to 2 grains every hour. See Hufeland's Journal, Bd. 78, and Hecker's Annalen, Bd. 17.

Dose and form of exhibition. It may be prescribed in the form of infusion, made with 3ss. of the dried plant, and 3vj. of boiling water, of which a tablespoonful may be given every two hours. A stronger infusion is obtained by treating it with equal parts of wine and water. Externally it has been applied as a poultice, to relieve colic; and in the form of enema, (3ij—3ss. infused in two ounces of water,) conjoined with other vermifuge

remedies.

R Absynthii, 3ij.
Valerianæ, 3ss.
Inf. Aq. fervid q. s.
Colatur. 3ij. adde.
Syrupi Aurantii, 3j. M.

S. To a child from 5 to 8 years old, a tablespoonful every two hours.—Fränkel.

R Enem. Aloes

Infus. Absynth. (ex. 3ss.) āā 3iv. M.

S. One half to be used at a time, as an enema to dislodge ascarides from the rectum.

ACACIÆ. VERÆ GUMMI. Gum Arabic, is a well known demulcent. When administered by itself, it is imperfectly

Hence, by affording a useful sheathing to abraded mucous surfaces, and an envelope to acrid matters, it tends to lessen morbid irritation. From its ready solubility in water, and its tastelessness, it constitutes a valuable auxiliary in the treatment of infantile diseases. Its use is indicated in affections of the intestinal canal, in diarrhœa, in catarrhal affections, in inflammatory condition of the urinary organs, in dysuria and strangury, in cases of poisoning, and to involve acrimonious ingesta. In the violent diarrhœa and colic, concomitant on dentition, where we are doubtful as to the existence of inflammation of the mucous membrane of the bowels, the mucilage of acacia may be beneficially given. There are several ailments of infants which manifest themselves by tormina, vomiting, looseness, aphthæ, and ulcers of the mouth, which, if not dependent on inflammation, are more or less connected with irritation of the affected organs, where the French practice of administering mucilaginous demulcents, in union with suitable external means, as baths, milk enemas, fomentations, and even leeching, is preferable to the more heroic one of resorting to stimulant purgatives and aromatics.

Dose and form of exhibition. Internally administered, the mucilage prepared from gum arabic ought to be thick, so as to admit of dilution in its transit through the first passages. As an enema we may employ a solution, containing one part of gum

in three parts of water.

R Ol. Amygdal. rec. express. Pulv. Acaciæ.

Syrup. Altheæ, aā 3ij. Aq. Cinnam., 3ss.

Aq. Fœniculi, 3j. M.

S. One or two teaspoonfuls every hour, in infantile diarrhæa.-Richter.

R Mist. Acaciæ, Ziss. Aq. puræ, Ziiiss. Syrupi, 3ss. M.

S. A tablespoonful frequently in bronchial catarrh.

R Pulv. Acaciæ, 3ss. Sacchari purif., 9j. Amyli, gr. x. f. Pulvis.

S. One to be taken frequently.—Kirby.

6.

R Mist. Acaciæ. Albuminis ovi. Syrupi, āā partes æquales.

Μ.

S. Linctus for local irritation about the mouth .- Boerhaave.

ACETUM. Vinegar, is used as a refrigerant and antiseptic, in febrile and hemorrhagic diseases. Internally given in a diluted form in fever, it is said to diminish heat of surface and quickness of pulse, and to improve the secretions. As an adjunct to enemas it is recommended by Autenrieth in croup, and in all cases of determination of blood to the head, where it is desirable to produce prompt derivation. This effect may be heightened in particular instances, as hydrocephalus, by injecting the fluid The common vehicles for thus administering it, are water, oatmeal gruel, or infusion of chamomile. The quantity for young children is half a tablespoonful of vinegar in threequarters of a cup of water; between one and a half and three years, one tablespoonful; between three and six years, one and a half to two tablespoonfuls. It is sometimes advisable to add a little honey or oil. It may be used once or twice a day, but in urgent cases every three hours. In similar circumstances, Wendt extols the use of pediluvia, consisting of five parts of water and one of strong vinegar. Baths containing two or three pounds of it are prescribed in asphyxia neonatorum by Jörg. Flannel clothes wrung out of hot vinegar, and laid, as warm as they can be borne, on the abdomen or chest, often afford marked relief after bloodletting, in inflammation of these parts. Its external application as a refrigerant lotion, cold or tepid, is adapted to every case in which the skin is preternaturally hot, as in scarlatina, &c. The vapour of vinegar diffused through the sick-room has been employed by Home and Cheyne, in the second stage of croup, with success. abates irritation of the air passages, and promotes the bronchial exhalation.

Rectified wood vinegar has been successfully employed by Klaatsch, Teufel, and Schubarth, in the gelatinous softening of the stomach with a disposition to alkalescence, occurring in infants. Great care must be had in its administration, as it is apt to give rise to sudden paralysis and fatal convulsions. Excessive doses produce squeamishness, vomiting, convulsions; cutaneous frictions and a cool pure air are the best antidotes for such accidents.

Dose and form of exhibition. Wood vinegar may be given to children from six months to two years old, (the above disease occurs almost exclusively within the above periods,) in the quantity of a teaspoonful of a mixture containing 3j.—3ij. of it, in 3ij.—3iij. of water, sweetened with syrup. Klaatsch

employs the acid externally for cancrum oris. He directs its application to be continued until the sore assume a healthy

granulating appearance.

4

Richter employed in the same disease the crude pyrolignous acid, which has been found also of benefit in porrigo. Its peculiar antiseptic properties seem to depend on the large amount of creosote combined with it, $1\frac{1}{2}$ per cent. it is said.

R Acid. Pyrolignosi, 3j. Inf. Salviæ., 3vj. M.

S. Gargarisma; in putrid sorethroat.
Fränkel.

Acetum Scille. Vinegar of squill, is diuretic and expectorant, and is employed in cases of dropsy occurring after exanthematous diseases, as scarlatina; and in hooping-cough and croup, when the pulmonary tubes and bronchial cells are loaded with mucus. As squill is an excitant, its use is necessarily contraindicated in all inflammatory cases. The dose is from 5 to 20 minims in any aromatic distilled water. It may be advantageously combined with other diuretics. Its external application is recommended by Becker and Gräfe for resolving the sanguineous tumours of new-born children.

8.
R Potass. Acet., 3ij.
Solve in Aq. Cinnam., 3iij.
adde
Aceti Scillæ, 3ij.
Syrup. Aurantii, 3j. M.

S. A dessert-spoonful several times a day to a child two or three years of age, in dropsy after scarlatina.

R Aceti Scillæ, 3j.
Ammoniæ Hydrochl., 3ij.
Aq. distill., 3vj. M.

S. Lotion .- Gräfe.

ACIDUM HYDROCHLORICUM. Muriatic Acid, is an efficient tonic in the malignant forms of typhus fever and various exanthemata. According to Dr. Thiel it is almost a certain specific in hooping-cough. He gives it in large doses, beginning with 3ij.—3iij. in the day, increased to 3ss. or 3vj. diluted with water and sweetened with sugar. Mixed with a strong infusion of quassia, Dr. Paris considers it to be the most efficacious remedy for preventing the generation of worms.

Dose and form of exhibition. For a child of from two to six years of age, from 9j. to a drachm may be diluted in Ziv. or Zvj. of water, sweetened with sugar; and a tablespoonful taken frequently. Muriatic acid is used externally in gangrenous ulcers, occurring in a spongy or scorbutic state of the gums; in aphthæ; in gangrenous sore-throat; in noma; and, combined with some emollient ointment, in porrigo. applied to the fauces by a small piece of sponge, fastened to whalebone, which after being soaked and pressed, so as to squeeze out all the superfluous acid, is made to touch the ulcers. As a gargle it may be used in the proportion of 3j. to 3vj. of water, sweetened with syrup. mori or mel rosæ.

R Acid. Hydrochloric., 3j. Syrup. Mori, Zj. Aq. Distil., 3vj. f. Julep. M.

S. A tablespoonful to betaken every 4 or 5 hours.

12.

R Herbæ Salviæ, 3ss. Inf. Aq. fervid, q. s. Colatur. Zviij. adde Acid. Hydrochlorici, 3iss. Syrup. Mori, Zij. M. f. Gargarisma.

In malignant sore-throat.

Wendt.

14.

R Ung. Sambuci, 3x. Acid. Hydroch., 3ss M.

f. Ung. Apply twice a day in porrigo.

16.

R Acidi Hydrochlor. Mellis, āā. Partes Æquales. M.

in diphtherite.—Brettonneau.

11.

R Infus. Rosæ, Zvj. Acid. Hydrochlor., 3ss. Tinct. Capsici, 3j. M. ft. Gargarisma.

13.

R Acid, Hydrochl., 3ij. Syrup. Mori, Zij. M.

S. To touch the parts in cases of Stomatitis. - Wendt.

15.

R Acid. Hydrochl.

Mellis rosæ, āā 3ss. M.

S. Application in cancrum oris .- Klaatsch.

17.

R Acid. Hydrochlorici, gt. xx. Aq. Rosæ, Zij. Mist. Acaciæ, 3j.

M. ft. Lotio. For dissolving S. To touch the fauces with, ferruginous particles from the eye .- Phobus.

ACIDUM HYDROCYANICUM. Prussic acid, is a powerful sedative. Puchelt recommends its employment in Carditis infantum after depletion. Of its efficacy in hooping-cough, the best account is furnished by Dr. Atlee, of Philadelphia. That physician employed it successfully in the cases of 200 children; the cure occupied from four to fourteen days. administered the hydrocyanic acid in the following way: to a six months' child he gave a teaspoonful of a mixture, containing one drop of the acid in an ounce of syrup, twice in the day; provided it did not disagree or produce head symptoms, he gave to the extent of three teaspoonfuls; for children between one and two years, he added two drops to the ounce of syrup, and so on, an additional drop for each year. To young persons from twelve to fifteen years of age he conjoined six drops with the ounce of syrup. The same success has not, however, attended its employment in the hands of other practitioners; and from the danger with which any errors in administration might be fraught, we should be very chary of resorting to it in ordinary cases.

18.

R Potass. Bicarb., gr. xv. Cocci Cacti, gr. viij. Acid. Hydrocyan., mx. Aq. Stillat., zvj. M.

S. A teaspoonful when the cough is troublesome in pertussis.—Granville.

19.

R Infus. Aurantii, Zv. Acid. Hydrocyanici, Mviij. Syrupi de Absynthiis, Zj. Signetur ut supra. Granville.

20.
R Acid. Hydrocyan., mxij.
Aquæ Rosæ, 3vss.
Syrup. Papav., 3iii. M.

S. A teaspoonful every two or three hours, in croupy cough, after the bowels are evacuated.—Granville.

ACIDUM SULPHURICUM DILUTUM. Dilute sulphuric acid, is an excellent tonic and refrigerant. Under its use the action of the capillaries over the whole system becomes YORKSHIRE COLLEGE augmented, nutrition is increased, and the enfeebled functions. are restored to a healthy standard. It may be given in the advanced stages of inflammatory and febrile disorders, where there are signs of colliquium or hæmorrhage, and in convalescence.

Dose and form of exhibition. The diluted acid may be exhibited in the dose of from v. to xx. minims, frequently repeated, in cold water sweetened with syrup.

Aquæ, Ziv. Syrupi Mori, Zj.

R Acid. Sulph. dil., 3ss-3j. R Acid. Sulph. dil., gtt. xxx. Aquæ, Ziv. Syrup. Mori, Zj. M.

Syrupi Mori, Zj. M.

Dose. A tablespoonful three or four times a day.

S. As an astringent to fungous growths on children.

—Henke.

ACONITUM. Aconite, is a narcotico-acrid. The only disease of children in which I am aware of its having been employed is hydrocephalus. Dr. Willis informs me he has seen benefit result from the administration of the inspissated juice in the dose of 18th of a grain three times a day, in conjunction with active purgatives.

Impure diacetate of copper, is only externally used in the form of solution or cerate. Desault and Bicker recommend its application in tinea capitis. The last-named authority conjoins with its use the internal exhibition of muriate of barytes or Plummer's pill, and the hot bath. crusts spontaneously separate soon after the application of the cerate, or may be easily detached with a soft brush. scalp is to be afterwards washed for some time with a solution of potash.

23.

R Æruginis.

Hydrarg. bichloridii, āā, gr. vj. Aq. distill., Zij.

M. Lotio .- Desault.

R Æruginis.

Hydrarg. Chlor., āā, Đj. Cerati, 3x. M.

S. An ointment to be applied night and morning to the scalp.—Bicker.

ALLIUM SATIVUM. Garlic, is endued with anthelmintic properties. It is generally prescribed in the form of enema.

R Allii rec., 3ss.
Infunde Aq. bull. lbss.
Colatur, adde

Assafætidæ in Vitell. ovor. sol., 9ij. M.

S. One-half to be injected at a time, as an enema for dislodging and evacuating ascarides.—Fränkel.

ÆTHERES. Ethers constitute the most volatile of diffusible stimulants. They have the faculty of increasing the action of the heart; and their administration is therefore indicated in cases of extreme collapse or great nervous debility, where it is of consequence to make a sudden powerful impression. From their tendency to produce determination of blood to the head, their use ought to be restricted to but few and urgent cases. They are to be given at first in small doses frequently repeated and discontinued, and other less energetic stimuli substituted so soon as they produce the desired effect.

It has been suggested to combine tonics requiring a conside-

rable force of digestion, as cinchona with ether.

ÆTHER SULPHURICUS. Sulphuric ether, is highly valuable as a diffusible stimulant, hypnotic and antispasmodic. Its use is indicated in nervous prostration, in the apparent death of newborn infants, in suffocative catarrh, in severe colic, convulsions, and flatulence. It may be given internally in any liquid vehicle in doses of from two to twenty drops every hour or every half hour. If it be dropt on any part of the body exposed freely to the contact of air, its prompt evaporation produces an intense degree of cold. As a topical refrigerant, it has been turned to account in the treatment of Hydrocephalus acutus. Ether, according to Dr. Reid, produces decided sedative effects on the spinal system, when given in the form of enema.

Spiritus Ætheris Nitrici. Is carminative, promotes the natural secretions, and imparts tone to the stomach; combined with the aromatic spirit of ammonia, it proves diuretic and diaphoretic. It may be given in the same quantity and manner as the sulphuric ether.

26.

R Aquæ Menthæ, ʒiss.
Sp. Ammon. arom., ʒss.
Sp. Ætheris Nitrici, gt. xij.
Sp. Lavand. Co., ʒj.
Syrupi Caryophillorum, ʒss.
M. 3j. horâ quâque secundâ.

A good general stimulant for children. Evanson and Maunsell.

ALOE. Aloes is seldom prescribed in infantile practice, from its nauseous taste and its liability to gripe; but, according to Drs. Evanson and Maunsell, there is no purgative that, if judiciously employed, is more useful. The aqueous extract, Extractum aloes purificatum, being devoid of the acrid resinous principle, may be considered the most mild and efficient preparation. Aloes passes through the first passages almost unchanged, stimulates the liver, and promotes the flow of bile; and in virtue of its well known action on the rectum, proves peculiarly hostile to ascarides. The taste of aloes is well hidden by combination with liquorice root; and according to the above authors, there are perhaps few medicines to the taste of which children sooner become reconciled. It is indicated in those cases where head symptoms impend without inflammatory action being present.

Dose and form of exhibition. Of its various preparations the compound decoction and the vinum aloes are those most suitable for administration to children. As a vermifuge it may be employed in the form of suppository or ointment. When the ointment is used in the German Hospitals, a small portion is rubbed round the navel, in instances of colic connected with worms.

27.

R Dec. Aloes Co., Ziss. Ext. Glycirrhizæ, 3ij. Vin. Aloes, 3ij. M.

S. One to two drachms twice or thrice a day. The anthelmintic powers of this mixture will be much enhanced by the addition of half a drachm or a drachm of the muriated tincture of iron, which also corrects the tendency to regeneration of worms.—Evanson and Maunsell.

R Pulveris Aloes, 3ss. Muriatis Sodæ, 3iij. Farinæ, 3ij.

Mellis, q. s., ut fiat. massa.

28.

S. A piece, the bigness of a nut, to be introduced as a suppository .- Swédiaur.

29.

R Pulveris Aloes, 3j. Ext. Fellis Bovini, 3ij. Ung. Simplicis, 3j.

S. The ointment for colic from worms.

30.

R Vini aloes. Aq. Cinnam., āā, 3ss. Ammon. Sesquicarb., gr.v.

Μ.

Μ.

S. In colic, from disorder in the first passages. Dose, a dessert-spoonful frequently repeated .- Willis,

ALTHÆÆ RADIX. Root of the Marshmallow; it contains mucilage and starch, and is said to be slightly nutrient; and one of those agents that may be employed, with advantage, in the various forms of disease to which the French have appropriated the term "catarrh," where the demulcent medication is often negatively of essential utility. The remarks formerly made in reference to gum arabic are applicable here. The mucilage of marshmallow is beneficial in irritation about the fauces and air-passages, and in gastro-enteritic affections. Hence aphthæ, vomiting, diarrhæa, will often disappear under the simple administration of this and other remedies of the same class.

Dose and form of exhibition. The decoction is best adapted for internal use. It may be made by boiling one or two drachms of the root and a pound of water quickly down to 3 ths of a pound, and sweetened with syrup. By protracted ebullition the mucilage of althea undergoes partial decomposition. Where it is desirable to shield or varnish the lining membrane of the stomach against acrimonious substance or secretions, a decoction of 3j. to 3vj. of water, reduced by boiling to 3v., edulcorated with sugar, may be given, at frequent intervals, in half-ounce doses. It is externally employed in the forms of fomentations, injections, gargles, enemas. The quantity is a drachm boiled in a cupful of milk.

ALUMEN. Alum. Sulphate of alumina and potash is a powerful astringent. By exciting contraction of the capillaries, it exercises a favourable influence in certain inflammations of the dermoid and mucous tissues. Such are inflammations of the tunica conjunctiva, of the tonsils, velum pendulum, and of parts of the mucous membrane, which are within reach of manipulation, as that which lines the mouth and fauces. Aretæus extols the utility of the topical application of alum in chronic inflammations of the mouth and throat. In those affections too of the mucous membranes, attended with the formation of a pellicle, or an exudation from the inflamed surface, and which have been recently termed by Bretonneau, Diptherites, the insufflation of powdered alum is of eminent service, according to this author and Löffler. Laennec too found the inhalation or insufflation of very finely powdered alum afford great and speedy relief, not only in tracheitis, but also in laryngitis, and in tonsillitis or amygdalitis. From two to six applications are generally sufficient. Velpeau advises the inflamed tonsil to be freely rubbed over with the powder, by means of the finger, and afterwards washed with a saturated solution of the salt. Billard touches the surface of aphthæ with solid alum, in order to produce a new action in the vessels of the part, and thus promote cicatrization.

In the second and third stages of catarrhal conjunctivitis, after the violence of the inflammation has been in a great measure got under by antiphlogistic means, the advantage of alum collyria is often signal. A saturated solution forms an useful styptic to repress the bleeding from leech-bites; and to arrest passive hemorrhage, when it can be brought into contact with the vessels pouring out the fluid. Mursinna recommends the same, with addition of sulphuric acid, locally employed, for the

cure of hydrocele in children.

31

R Mellis Rosæ, Zij.
Aluminis, Zj.
Tinct. Myrrhæ, Zss. M

S. A liniment to be applied in inflamed states of the buccal membrane.—Neuhoff.

33.

R Aluminis, 3j.
Solve in
Inf. Herb. Salviæ.
(ex 5iv. parat.) 3vj
Mellis Rosæ, 3j. M.

S. A gargle for the atonic stage of croup.

32.

R Aluminis, 9j.—3j. Aq. Ros., 3jj. Solve. M.

S. A lotion for aphtha.— Lüttmann. Ficinus.

34.

R Aluminis Crud. Gumm. Tragacanth, āā3j. M. Styptic Powder. Fränkel.

35.

R Aluminis, gr. ij. Solve in Aq. Ros. Zj.

M. Collyrium in Ophthalmia neonatorum.
Fränkel.

AMMONIÆ HYDROCHLORAS. Sal-ammoniac, is a neutral salt which has a remarkable power of retarding the coagulation of the blood and diminishing its plasticity. Its use is indicated in febrile diseases of a somewhat sthenic type; and in morbid conditions of the processes of vegetative life, when recent and associated with inflammatory excitement. To these belong slight inflammatory and catarrhal fevers; inflammation of the mucous membranes, as catarrhal angina; bronchitis; croup (after abstraction of blood, and combined with senega); pituitary diarrhæa; intermittent fever, caused by some interruption in the processes of assimilation and nutrition. In all these instances its administration seems to regulate and improve the secretions.

Dose and form of exhibition. Internally it is best given in the form of solution, in the proportion of 9ss.—9j., dissolved in two ounces of water. Of this a teaspoonful may be given to an infant every two hours. To children somewhat older, a tablespoonful of a solution, containing 3j., to the 4 ounces of

water, may be exhibited every two hours. The best corrective is the juice of liquorice; as that, however, is apt to tinge the tongue and the evacuations, and so falsify the diagnosis, the syrup of orange-peel or mulberries may be substituted in its stead. Externally it is used in the form of gargle, 3j. to 3vj. of water. Gräfe recommends, in hydrocele, a lotion of 3ss. of the salt, to 3x. of water. A mixture of equal parts of salammoniac and nitre, enclosed in a bladder, and allowed slowly to dissolve in six or eight parts of water, forms a convenient means of producing artificial cold, and reducing morbid temperature.

36.

R Ammoniæ hydrochl., 3j. Dec. Malvæ Co., 3jij. Syrup. Violæ, 3j. Vini Antimonii, 3ss.

M. Every two hours a dessertspoonful to children between two and five years old.— Wendt. 37.

R Radicis Senegæ, 3j.
Coque c. Aq. Commun.
q. s.
In Colatur., 3iv. Solve.
Ammoniæ hydrochl., 9j.
Ent. Glycinhizæ, 9ij.

M. A dessert-spoonful every hour in croup for a four months' child.—Sachse.

38.

R Ammoniæ hydrochloratis, 3ij. Acid. Acetici dilut. f Zij. Sp. Camphor. f. Zss.

M. Refrigerant Lotion .- Paris.

AMMONIÆ SESQUICARBONAS. Sesquicarbonate of Ammonia, is an excitant, or medicine capable of producing a strong local impression on the nerves. Its action resembles that of musk, but is more stimulant, and therefore more appropriate to cases of diminished sensibility, with small and hardly perceptible pulse. It is an efficient antispasmodic, not to be neglected in infantile convulsions when life is in danger. A dry skin, a small feeble pulse, and dyspnæa, constitute in spasmodic diseases the principal indications for its use. According to some authors, gastric complications are its contra-indicants. Dr. Strahl has recently tried the sesquicarbonate of ammonia with success, in numerous cases of scarlatina. And Dr. Peart recommends it in scarlatina maligna, in large doses (five or six grains every second or third hour), as a sort of specific for that disease. It is especially indicated in the latter stages of febrile

and eruptive diseases, when tremors and subsultus tendinum are present. In chest affections, after the active inflammation is past, ammonia in the gaseous form, diluted with air, or in the liquid form, diluted with water, according to Thomson, promotes expectoration, and is the best mode of relieving oppressed respiration. In sloughing affections of the mouth, even after gangrene has commenced; in asphyxia, syncope, asthma, and hooping-cough; and in all cases of increased irritability of the system, associated with debility, is the sesquicarbonate of ammonia a valuable medicine.

Dose and form of exhibition. Internally it ought always to be given in solution, and may be combined with aromatic confection, in the dose of 1, 2, or 4 grains. Of the Liquor Ammoniæ Sesquicarbonatis from 5-30 minims may be exhibited in any bland fluid. In Croup, Rechou recommends friction upon the neck with a cerate composed of 3j. of the carbonate and 3ij. of cerate, repeated every quarter of an hour, until an eruption of vesicles, with itching and burning, makes its appearance.

39.

R Ammoniæ Sesquicarb., 3ss. Aq. Menth. Pip. f. Zvij. Syrup. Aurantii, f. 3ss.

M. A tablespoonful occasionally.—Paris.

40.

R Ammoniæ Sesquicarb., gr. viij. Mist. Acaciæ.

Syrup. Althææ, āā 3ss. Aq. flor. Sambuci, 3iij.

M. Emulsio. A teaspoonful every hour .- Richter.

R Ammoniæ Sesquicarb. gr. iv. Moschi, gr. vj. Sacchar. Albi, 3iij. Aquæ Anethi, Ziss.

M. A teaspoonful every hour in the spasms of infants .- Wendt.

AMMONIACUM. Gum ammoniac, is stimulant and expectorant, promoting the functions of absorption and exhalation on serous and mucous surfaces. Its prolonged use impairs diges-In large doses it is purgative. It is employed as an expectorant in the advanced stages of various diseases of the lungs, as pneumonia and hooping-cough, when large accumulations of purulent or viscid matter coexist with diminished

power. Combined with rhubarb it proves valuable, according to Dr. Paris, in mesenteric affections, by correcting the viscid secretion of the bowels. Any undue excitement of the circulating system is a contra-indication to its employment. It

ought never to be given to very young children.

Dose and form of exhibition. Internally, the Mistura ammoniaci, sweetened with sugar or liquorice, may be given to children in the dose of a teaspoonful, three or four times a day. Externally applied, in the form of plaster, ammoniac proves stimulant and discutient in chronic affections of the joints, and in tumours. Evers recommends the application of the plaster in cases of inveterate tinea capitis, having previously removed the hair and softened the crusts with lard. It is allowed to remain in apposition from six to eight weeks; at the end of which period, the skin is found restored to a healthy condition. It seems to act by destroying the diseased bulbs forming the roots of the hair.

42.

R Mist. Ammoniaci, Aquæ Cinnam. āā f ziss. Syrup. Tolut., f zss. Tinct. Castorei, f zij. Tinct. Opii. m v.

M. A teaspoonful occasionally.—Paris.

44.

R Ammoniaci, 9j.
Solve in
Oxymel. Scillæ, 3ss.
Adde
Vini Antimonii, 3j.
Syrupi Glycyrr. 3iss.

M. Every two hours a teaspoonful to a child five years of age.—Phæbus.

43.

R Acid. Nitric., f. 3j.
Aq. Puræ, f. 3iv.
Misce dein tere cum Ammoniaci, 3j.
Donec emulsio evadit.

M. A teaspoonful in any demulcent drink.—Paris.

45.

R Ammoniaci, gr. xxiv.
Tere cum
Mist. Acaciæ, 3ss.
Adde
Aq. Fæniculi 3ivss.
Syrup. Althææ, 3j.

M. A tablespoonful thrice a day.—Wendt.

AMYLUM. Starch, is nutritious and demulcent when taken in the form of jelly. A wholesome potion is made by mixing three drachms of potato-starch with a pint of water, and boiling till they become a mucilage. From its emollient properties it is frequently used for enemas. From two to eight ounces of the

Decoctum Amyli may be injected. It is sometimes externally applied to excoriations; but is objectionable, inasmuch as it tends to form crusts, beneath which acrimonious secretions are

apt to accumulate, and create pain and inflammation.

ANYLUM MARANTE. Arrow-root, is a nutritive species of starch, very analogous to well-washed potato-starch. It is in great repute as an article of nursery food. It does not quicken the circulation, and is easily digested. It is useful for weak and delicate children, for such as are reared by hand, and for whom the nurse's milk seems inadequate. The pap is prepared by forming a teaspoonful into a paste with a little cold water, then pouring upon it about a teacupful of boiling water and exposing it to heat, until it be an uniform jelly. This quantity may be given twice or thrice a day. It may be sweetened with sugar, enriched with milk, or flavoured with spice, brandy, or wine, if either of these be admissible.

Sago (Sagus farinifera) and Tapioca (Iatropha manihot) are not varieties of starch, according to Dr. Duncan, but of amidine. The modification is effected by the heat employed in the process of drying or slight torrefaction. Salep (orchis mascula) is not an amylaceous substance, but analogous to gum tragacanth, containing a large proportion of bassorin. See "Supplement to the New Edinburgh Dispensatory," p. 17.

ANETHUM. Dill. The Aqua anethi forms an excellent carminative for children. If acid, which it sometimes is, a little sesquicarbonate of soda or magnesia ought to be added to it. The dose is a teaspoonful. It is indicated in flatulent colic unattended with inflammation.

ANISUM. Anisced. The officinal preparations of anisced are employed as carminatives.

ANTIMONIUM. Antimonii Oxysulphuretum. Precipitated sulphuret of antimony, is said to exercise considerable influence on the mucous membranes, and particularly that of the lungs. It is therefore indicated in laryngitis, bronchitis, tracheitis. If, after inflammatory attacks, the bronchiæ are charged with mucus, expectoration is promoted by a combination of this medicine with calomel. It is useful for effecting the detachment of the plastic lymph in croup, when united with senega or liquorice, and may be given every half hour;

or with calomel every two or three hours, in the proportion of \$\frac{1}{3}\text{d to \$\frac{1}{2}\$ a grain. It is also indicated in affections of the lymphatic and glandular systems, and in those of the skin, but is seldom

given without calomel.

Dose and form of exhibition. The precipitated sulphuret of antimony is given to infants in the dose of $\frac{1}{4}$ to $\frac{1}{3}$ of a grain; and to older children, from $\frac{1}{2}$ to one grain, frequently repeated. In croup, when it is desirable to provoke vomiting, the above doses must be repeated at very short intervals.

46.

R Dec. Senegæ.
Oxymellis Scillæ.
Syrupi Croci, āā ǯj.
Antimonii Oxysulph.gr.iv.

M. After being well shaken a teaspoonful every hour to a child three or four years old, in croun. 47.

R Hydrar. Chlorid.
Antim.Oxysulph, āā gr.iv.
Sacchari Albi, 3ij.
Divide in pulv. xii.
Æquales.

M. One thrice a day in scrofula.—Wendt.

Antimonii Potassio-Tartas. Tartar emetic, exercises a direct action on the intestinal canal. In small doses it augments the secretion and exhalation from the alimentary mucous membrane, the liver, pancreas, kidneys, and skin. It promotes the functions of absorption by stimulating the lymphatic and glandular systems. In large doses it acts promptly and powerfully on the stomach and bowels, and influences the nervous system of the abdomen. Sense of prostration, slow pulse, cold surface, accompany the nausea, the emesis, and looseness which speedily ensue. Of all emetics, tartar emetic creates most nausea in proportion to the vomiting, and from the depression it is thus apt to induce, ought never to be given to children without good reason. When we use vomiting for making an impression on the system at the beginning of febrile diseases, or croup, we may resort to it; as also for relieving deep-seated and refractory mucous obstructions.

In croup, Dr. Stokes advises that the medicine should be so exhibited as to produce free vomiting, at least once in every three quarters of an hour. The patient should be kept in this state for several hours, when, according to circumstances, the remedy may be given less actively, (Diseases of the Chest, p. 217.) Mr. Porter, on the other hand, thinks that we ought to give the tartar-emetic in such doses as may maintain a

state of nausea, until the fever, hurried respiration, and other symptoms of danger, disappear. (Observations on Surgical Pathology of the Larynx, 1826.) For the introduction of this remedy in the treatment of croup, the science is indebted to

Dr. Cheyne.

In minute doses it may be advantageously given in inflammatory affections, and especially in those of the parenchyma of the lungs, after preliminary abstraction of blood. In bronchitis; in the early stage of hydrocephalus, in order to mitigate increased cerebral action, but vomiting must be guarded against; and in ophthalmia; in subacute pulmonary inflammation, occurring in debilitated children, when the indication for abstraction of blood is often equivocal; or where a bilious or pituitous complication predominates, we may at once commence the exhibition of tartar-emetic with great advantage. It regulates the secretions; its action being most evident on the skin, which it preserves soft and moist. We may give to infants a teaspoonful of a solution containing half a grain of tartar-emetic, in half an ounce of water, sweetened with an ounce of syrup; to children between the age of one and four, we may increase the quantity to 3 or 1 grain; and in older children to 1½ or 2 grains. The Vinum Antimonii, given either by itself or in combination with oxymel of squill, is a very efficient expectorant. To children of two years, in the dose of 4 drops; six years, 6 drops; and ten years, 10 drops, several times a day. The presence of gastric irritation is a contra-indication to its use. Its prolonged exhibition, even in small doses, I am disposed to consider as apt to engender a morbid fretfulness of the stomach.

As a local irritant applied to the skin, we frequently employ the tartar-emetic. It may be used in the form of plaster, in that of ointment with the aid of friction, or in an aqueous lotion. The last is the mildest and least painful, and, consequently, the best adapted for children. According to Rayer, colic and purgation have been produced in infants by the use of antimonial ointments; and sloughing and death have been the consequence. The application ought in no case to be made to wounds, leech-bites, or blistered surfaces. However applied we find a pustular eruption (phlyzacia) on the second or third day. The prolonged use of the ointment after the eruption produces small ulcers.

Autenrieth recommended to use a salve in hooping-cough, consisting of 2½ parts of tartar-emetic to 8 of lard; and to rub

a bit the size of a hazel-nut over the epigastric or præcordial regions thrice a day. Autenrieth generally continued the frictions until small incrusted ulcers made their appearance. Under this treatment the disease is said to have subsided in from eight to twelve days. It has been so employed also as a means of limiting, modifying, or removing morbid reproduction in other parts; in internal inflammations of the organs pertaining to vegetative life, internal hydropic accumulations, scrofulous porrigo, and ophthalmia. The pustules from the use of the plaster are not developed before the fifth or sixth day. The pain of the pustules is best relieved by a bread poultice.

48.

R Antimonii Potassio-tart.
gr.ss.—ij.
Aq. destillat. \(\frac{3}{5} \)ss.
Syrup. Mori, \(\frac{5}{3} \)j.

M. A teaspoonful every two hours.—Fränkel.

50.

R Aquæ destillatæ, Zj. Liq. Antimon. tart. Zss. Syrupi Simp. Zss.

M. A teaspoonfulevery quarter of an hour until vomiting occurs.--Evanson and Maunsell.

49.

R Antim. P. t. gr.ss. Aq. destill., Zj. Ext. Hyoscyani, gr. ij. Syrup. Althææ, Zss.

M. A teaspoonful every hour to an eighteen months' child.--Fränkel.

51.

The addition of squill still farther adds to the efficacy of the compound, as follows:

R Aquæ destillat. Zj. Vini Ipecac., Zss. Liq. Antim. Tart. Zij. Syrupi Scillæ, Zij.

M. 3j.—3ij. Sæpe ad emesem•—Do.

Pulvis Jacobi ver James's Powder, is diaphoretic, and may be advantageously given in febrile diseases, combined with small quantities of calomel or Hydrargyrum c. Cretâ in the dose of 1 to 5 grains. Dr. Cheyne recommends this practice in remittent fever, particularly when the sensorial functions are affected; and the occurrence of hydrocephalus may therefore be apprehended. In hydrocephalus itself the same combination has proved serviceable. The pulvis antimonialis may be reckoned quite inert.

ANTHEMIS. Chamomile flowers, are a very common and excellent remedy, and much used in the treatment of infantile diseases in Germany. They are antispasmodic, carminative, and diaphoretic; and, for that reason, indicated in spasmodic and flatulent colic. The warm infusion of chamomile is capable of exciting vomiting. Of the cold infusion, flavoured with aromatic confection, from a dessert to a tablespoonful, may be given several times a day. Externally, chamomile flowers are applied as a discutient and emollient to the swellings on the head of new-born children; and Heim extols the infusion as a collyrium in Ophthalmia of new-born children (neonatorum). The infusion forms a useful enema in colic and dysentery.

ARGENTI NITRAS. Lunar Caustic is considered tonic and antispasmodic. It has been given in stomachic epilepsy and chorea, in the dose of 18th of a grain, gradually increased to 2 grains. Ryall recommends the external application of a solution of nitrate of silver, (ij. to iij. grains to an ounce of water,) injected betwixt the eyelids, as the most efficient remedy in the blennorrhœal ophthalmia of new-born children. When applied in solution to the mucous membrane of the mouth; in the case of aphthæ, or to the fauces in cases of diphtheritis of the pharynx, larynx, or trachea, the new action, induced in the part to which it is applied, according to Dunglisson, extends to the membrane lower down, and exerts at times the most salutary agency. The exudation of coagulable lymph, which has been proved identical with coagulated albumen, and which constitutes the false membrane in cases of diphtheritis, frequently begins on the surface of the tonsils, and thence spreads along the arch of the palate, and ultimately descends over the internal surface of the pharvnx and esophagus. According to Dr. Mackenzie, the application of a solution of the nitrate of silver to the tonsils, velum palati, and uvula, frequently removes this plastic exudation, produces manifest relief of the symptoms, and ultimately even dispels them. The solution he uses is 20 grains of the salt to an ounce of distilled water. The astringent effect upon the part of the mucous membrane, with which the solution is made to come in contact, says Dunglisson, may be propagated by continuous sympathy to the part of the trachea lined by the false membrane, a new action may be induced, the albuminoid substance

detached, and ultimately thrown off, unless a complete adventitious tube be formed in the trachea, when from the narrowness of the larynx its evacuation is impracticable. Gendron, Stephen Brown, Guimier, found the above mode of cauterization in croup useful, partly as a styptic, partly as a perturbent

agent.

Demiron suggested the application of nitrate of silver to The pustules are to be punctured, and then touched with a hair-pencil dipped in a solution containing 15 grains to the ounce of water. When the cauterization was performed on the first day, the eruption was seldom developed; the face became swollen, about the seventh day exhibited slight fissures, from which nothing exuded, and the skin desquamated, leaving no perceptible cicatrice, merely a few When cauterization was performed, on the second day, the formation of pustules, though not arrested, was lessened, and the scars were quite superficial. Beyond the second day, cauterization was inefficient. Velpeau lays open the fully formed pustules, and cauterizes them along with the adjacent integument with solid nitrate of silver. This method, according to him, checks the development of the eruption, hinders the ophthalmic affection, and moderates the sympathetic disorder of internal organs, especially of the brain. Other practitioners differ on this point. Husson saw death consequent upon cauterization in two cases, and Heller lost a patient from the same cause. Gerardin observed, in the Hospital for children, alarming accidents from the escharotic plan, particularly inflammation of the brain. (Meissner's Forschungen des 19 Jahrhunderts. Bd. vi. 1833). derived advantage from touching the sanguineous tumors of new-born infants, and erectile tumors with the lunar caustic.

A lotion of nitrate of silver of variable strength, according to the degree of local irritation, is a powerful remedy in scaly eruptions of the scalp. The hair ought to be previously removed, and the diseased surface cleansed by means of carrot poultices. An ointment containing 10 grains to the ounce of lard, has been introduced, and advantageously used, by Mr. Guthrie, in chronic inflammation of the conjunctiva. It ought to be recently prepared, and well rubbed in over the diseased surface. The nitrate of silver solution is an admirable application to fungous excrescences and unhealthy sinuous sores. In burns of the first degree, that is, where there is only

erythematous redness, the slight contact of the nitrate of silver removes the pain and prevents any subsequent vesication; con-

fluent aphthæ may be treated in a similar manner.

In the dusky red, erysipelatous inflammation existing in the fauces without ulceration or sloughing, the free application of a strong solution of nitrate of silver, (ten grains to the ounce,) to all the parts implicated, is recommended by Messrs. Evanson and Maunsell.

52.

R Argenti Nitratis, gr. iss.
Tere cum Micæ panis, q.s.
Ut fiat massa in pil.
xij. Æquales dividend.

M. One thrice a day in epilepsy.

53.

R Argent. Nitratis pulveriz., 9j Carbonis fagi, 3j.

M. ft. Pulvis. For insufflation upon the eye in blennor-rheal inflammation, with ulcers of the cornea.

54.

R Argenti Nitratis, gr. x. Ung. Cetacei, 3j. Liq. Plumbi diacet., mx.

M. In passive Inflammation of the conjunctiva.

Guthrie.

ARNICA. Leopard's tane, is reckoned stimulant and discutient in its effects. It is administered in asthenic diseases in order to promote the secretions of the skin, mucous membranes, and kidneys, and the absorbent functions of the veins and lymphatics, according to Fränkel. chiefly indicated in the latter stages of acute diseases, when there is an atonic or paralytic condition of the diseased parts with enfeebled powers of absorption, as in the sequence of Hydrocephalus acutus. In small doses, and properly administered, it raises the pulse and excites the action of the whole sanguiferous system. The root of the arnica possesses more of a tonic property than the flowers, and therefore merits the preference in ailments of the pulmonary and gastro-enteric mucous membrane, and especially colliquative diarrhea. For internal pains and congestions from bruises, arnica has long been celebrated, and has obtained the epithet of "panacea lapsorum."

Arnica is best exhibited in the form of infusion. A scruple of the flowers may be infused in a pint of water, sweetened with sugar, and drank at suitable intervals. According to Dr. Coxe, the flowers should be wrapt up in a piece of linen, otherwise their down is apt to be diffused through the liquid, and cause violent irritation of the throat. The dose of the root should be much smaller than that of the flowers. It may be advantageously united with calumba, cascarilla, ether, opium, &c. A strong infusion is a good external application to bruises.

55.

R Radicis Arnicæ, 3ss.

—Calumb., 9ij.
Coque c. Aq. q.s. per 4
hor. Colatur, 3iv. adde.
Vini opii, gtt. ij.
Syrup, 3ss.

M. A small teaspoonful every second hour to a child of two years, suffering from mucous diarrhæa.—Gölis.

57.

R Flor. Arnicæ, Ziss. Aquæ bull., Zvj. Infunde et cola.

M. A teaspoonful every hour in convulsions.

59.

R Flor. Arnicæ, 3j.
Aq. bull., 3j.
Infunda et colo ut fot letio

Infunde et cola ut fiat lotio.

M. To be applied in cases of commotion, contusion, and bloody extravasation, in or about the eye.

56.

R Radicis Arnicæ, 3j.
Coque c. Aq. fervid, q.s.
per \(\frac{1}{4} \) hor.
Colatur, \(\frac{7}{2} \) iv. refriger. adde.

Æther Sulph., gtt. x. Syrupi, 3vj.

M. A tablespoonful every hour to a well-grown child.—Gölis.

58.

Rad. Arnicæ, 3ij.
Coq. c. aq. com., 3ix.
Sub finem Coctionis, adde,
Pulv. Cascarillæ, 3ij.
Ad colat, 3vj. cui refrig.
adde, Tinct. Aurantii, 3ij
Syrup Simpl., 3j.

M. A teaspoonful every second hour.—Phöbus.

60.

R Flor. Arnicæ, 3ss.

Inf. per 4 hor. Aq. fervid, vase clauso Colat., 3iij. refrig. adde Syrupi Aurantii, 3ss.

Sp. Æth. Nit., gtt. vj.

M. A spoonful every two hours, to a child under two years in the advanced stage of hydrocephalus.—Gölis.

erythematous redness, the slight contact of the nitrate of silver removes the pain and prevents any subsequent vesication; confluent aphthæ may be treated in a similar manner.

In the dusky red, erysipelatous inflammation existing in the fauces without ulceration or sloughing, the free application of a strong solution of nitrate of silver, (ten grains to the ounce,) to all the parts implicated, is recommended by Messrs. Evanson and Maunsell.

R Argenti Nitratis, gr. iss.
Tere cum Micæ panis, q.s.
Ut fiat massa in pil.
xij. Æquales dividend.

M. One thrice a day in epilepsy.

R Argent. Nitratis pulveriz., 9j Carbonis fagi, 3j.

M. ft. Pulvis. For insufflation upon the eye in blennor-rheal inflammation, with ulcers of the cornea.

54. R Argenti Nitratis, gr. x. Ung. Cetacei, 5j. Liq. Plumbi diacet., mx.

M. In passive Inflammation of the conjunctiva.

Guthrie.

ARNICA. Leopard's bane, is reckoned stimulant and discutient in its effects. It is administered in asthenic diseases in order to promote the secretions of the skin, mucous membranes, and kidneys, and the absorbent functions of the veins and lymphatics, according to Fränkel. It is chiefly indicated in the latter stages of acute diseases, when there is an atonic or paralytic condition of the diseased parts with enfeebled powers of absorption, as in the sequence of Hydrocephalus acutus. In small doses, and properly administered, it raises the pulse and excites the action of the whole sanguiferous system. The root of the arnica possesses more of a tonic property than the flowers, and therefore merits the preference in ailments of the pulmonary and gastro-enteric mucous membrane, and especially colliquative diarrhæa. For internal pains and congestions from bruises, arnica has long been celebrated, and has obtained the epithet of "panacea lapsorum."

Arnica is best exhibited in the form of infusion. A scruple of the flowers may be infused in a pint of water, sweetened with sugar, and drank at suitable intervals. According to Dr. Coxe, the flowers should be wrapt up in a piece of linen, otherwise their down is apt to be diffused through the liquid, and cause violent irritation of the throat. The dose of the root should be much smaller than that of the flowers. It may be advantageously united with calumba, cascarilla, ether, opium, &c. A strong infusion is a good external application to bruises.

55.

R Radicis Arnicæ, 3ss.
—Calumb., 9ij.
Coque c. Aq. q.s. per ½
hor. Colatur, 3iv. adde.
Vini opii, gtt. ij.
Syrup, 3ss.

M. A small teaspoonful every second hour to a child of two years, suffering from mucous diarrhæa.—Gölis.

57.

R Flor. Arnicæ, Ziss. Aquæ bull., Zvj. Infunde et cola.

M. A teaspoonful every hour in convulsions.

59.

R Flor. Arnicæ, 3j. Aq. bull., 3j. Infunde et cola ut fiat lotio.

M. To be applied in cases of commotion, contusion, and bloody extravasation, in or about the eye.

56.

R Radicis Arnicæ, 3j.
Coque c. Aq. fervid, q.s.
per ¼ hor.
Colatur, 3iv. refriger. adde.
Æther Sulph., gtt. x.
Syrupi, 3vj.

M. A tablespoonful every hour to a well-grown child.—Gölis.

58.

R Rad. Arnicæ, 3ij.
Coq. c. aq. com., 3ix.
Sub finem Coctionis, adde,
Pulv. Cascarillæ, 3ij.
Ad colat, 3vj. cui refrig.
adde, Tinct. Aurantii, 3ij
Syrup Simpl., 3j.
M. A teaspoonful every

60.

second hour.—Phöbus.

R Flor. Arnicæ, 3ss.
Inf. per Ihor. Aq. fervid,
vase clauso Colat., Ziij.
refrig. adde Syrupi Aurantii, Zss.

Sp. Æth. Nit., gtt. vj.

M. A spoonful every two hours, to a child under two years in the advanced stage of hydrocephalus.—Gölis.

swelling. M. L. gives it every hour, except an hour before and two after each repast, and restricts the patient to a vegetable diet, and to drink water only. When given in large doses it produces nausea, vomiting, diarrhæa, vertigo, and death. The best antidotes are the soluble sulphates.

Dose. The muriate of barytes is given in solution in the quantity of $\frac{1}{8}$ th to $\frac{1}{2}$ a grain and gradually increased. Of the liquor barii chloridi from 1 to 4 minims may be ordered in a glass of water. It may be also given in combination with antimonial wine, extract of conium, and it has been externally applied to cutaneous eruptions, and nebulous opacities of the cornea by Hufeland.

65.
R Barii Chloridi, 3ss
Solve in
Aquæ destill., 3j.
Adde
Vini Antimonii, 3ij.

M. 10 to 15 drops every three hours.—Wendt.

66.

R Barii Chloridi,
Ferri Potass. tart., āā 3ss.
Solve in
Aq. Cinnam, 3j. adde
Syrup. Aurantii, 3j.

M. To children of two or three years, 8 to 10 drops in gruel every three hours; to those from four to six years 12 to 15 drops; and to older children 20 drops, at the same intervals.

67.
R Barii Chloridi, Əss.
Solve in
Aq. lauro-cerasi, Zij.
M. Eye-drops for nebula.—Hargens.

BELLADONNA. The leaves of deadly night-shade are powerfully narcotic and sedative, and possess considerable influence in promoting the excretions, particularly of sweat, urine, and it is also said of the saliva. As an external application they alleviate local pains. An over-dose occasions a peculiar dryness of the throat, violent head symptoms and death. They have been exhibited in chorea, epilepsy, amau-

rosis, ophthalmia, and hooping-cough. In German practice, the root is more frequently prescribed, being thought more certain in its operation.

Dose. The powder of the leaves may be ordered in the dose of $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$ gr. twice or thrice a day. Of an infusion made with $\frac{1}{9}$ ss.— $\frac{1}{9}$ j. in $\frac{1}{3}$ iij of water, a dessert-spoonful may be given twice a day.

68.

R Belladonnæ fol., gr.xxiv.
Aq. Commun. fervid, q.s.
Digere per hor. ½ vase
clauso loco tepido sæpe agitando. Liquor adhuc calid.
cola, colatur, refrig., ʒij. adde

Vini Antim., 3j. Syrup. Tolut., 3vj.

M. A dessert-spoonful three or four times a day in hooping-cough to a child ten years old.—Vogt.

69.

R Fol. Belladonnæ, 3ij.
Infunde aq. ferv., q. s.
Stent per hor. ¼ ad. colat.,
3viij.

M. To apply tepid by means of compresses to the eye in violent painful blennorrhæa. – Andreæ.

BISMUTHI TRISNITRAS. This compound of oxide of bismuth with nitric acid, is represented to possess antispasmodic powers. It is recommended by Dr. Abercrombie in cases of diphtheritis to relieve epigastric tenderness and vomiting, combined with opium. It may be also exhibited in convulsions depending on painful contraction of the stomach.

Dose and form of exhibition. The dose is from ½ gr. to gr. v. every 4 or 6 hours, along with Pulv. Tragacanth. Co.

70.

R Aq. Fæniculi, Ziiiss. Mist. Acaciæ, Ziij. Bismuthi Trisnit. Zss. Confect. Opii, Jij. M.

M. A teaspoonful every two hours.

BORAX. The biborate of soda, is extensively employed in Germany in the treatment of infantile diseases. It has a mild resolvent action, and is exhibited in cases of acidity of the primæ viæ and in aphthæ.

Dose. It is ordered in the dose of 3, 5, 10 grains in the form of linctus with mel rosæ, (3ss.,—3j. according to the age of the child, in 3ij. of mel rosæ; of which a teaspoonful may be taken four times a day;) externally it is applied in aqueous solution or mixed with honey, for the purpose of resolving aphthous crusts in the mouth and fauces of children. The solution of 3ss.—3j. in an ounce of water has been employed as a collyrium in scrofulous photophobia, (intolerance of light;) and a weaker solution for removing specks of the cornea.

R Magnesiæ Carb.
Sacchar. albi, āā, gr. v.
Boracis, gr. iij.—v.—x.

M. ft. Pulvis. One twice a day in acidity.—Richter.

R Boracis, 3ij.
Solve in
Aq. destill., z̄iv. adde.
Aq. lauro-cerasi, z̄ij.—iij.

M. Fiat lotio. Compresses kept constantly moist with this lotion to be applied to the eyes in scrofulous ophthalmia, conjoined with the internal use of calomel and cicuta in small doses.—Bonorden.

(Medizin. Zeitung v. Verein f. Heilk. in Preuse. No. 35.)

R Boracis, 3ij. Dec. Hordei, 3vj. Mellis Rosæ, 3ij.

M. ft. Gargarisma. To be used in scarlatina.—Wendt.

74. R Mellis Boracis, 3j. Aquæ, 3j. ft. Linctus.

M. To be applied three or four times a day in affections of the mouth, by means of a camel's hair pencil, feather, or piece of soft sponge.—Evanson and Maunsell.

CALAMINA. Impure carbonate of zinc, reduced to impalpable powder, is used for dusting over excoriated and burnt surfaces.

CALCII CHLORIDUM. Chloride of calcium is said to be tonic and deobstruent, and an excellent medicine, like barytes in scrofula, with what the German writers designate a "florid diathesis." It promotes the sweat and urine, but is contra-indicated in cases of feeble digestive powers. According to Hufeland, it is more exciting than the chloride of barium,

and requires greater caution in its use. Vogt and Hermann conceive it acts prejudicially on the nervous system, but invigorates the organs of secretion and excretion. Wood and Heinekin concur in extolling its virtues in scrofula. It has, moreover, according to Dr. Paris, been found of benefit in urticaria and several other forms of cutaneous disease.

Dose. Of the Liquor Calcii Chlor., from 15 to 30 minims

may be prescribed in any aromatic water.

75.

R Calcii Chloridi, 3j. Aq. destill., 3j.

M. 30 drops every three hours to a child of six years.—Hufeland.

76.

R Calcii Chloridi, 3j. Ext. Conii, gr. xv. Aq. Cinnam., \(\frac{7}{5}\ss. \)

M. f. mistura. 8 to 16 drops thrice daily to a child of ten years.—Phöbus.

77.

R Calcii Chloridi, 3j.
Tinct. Calumb., 3j.
M. 20 to 30 drops several times a day.—Niemann.

CALCII SULPHURETUM. A crude bisulphuret of calcium, known as the *Hepar Calcis*, has been recommended by Hahnemann as an external application to *crusta lactea*.

78.
R. Calc. Sulphur., 3ij.
Solve in
Dec. Althææ, Zij.
M. ft.Lotio.—Hahnemann.

CALUMBA, is a valuable stomachic and tonic, being free from astringency, and but little stimulant. It is believed to exert more or less influence on the abdominal mucous membrane, and on the liver; regulating and correcting their secretions. It is indicated in mesenteric affections and chronic diarrhea; and may be advantageously conjoined with rhubarb and neutral salts in the treatment of the former description of ailments.

Dose and form of exhibition. Calumba may be given in powder, infusion, or tincture. Of the first, from 5 to 15 grains may be exhibited thrice a day; of the second, a tablespoonful; and of the third, half a drachm. It may be conveniently combined with aromatics and chalybeates.

79.
R Infus. Calumbæ, Ziij.
Tinct. Ferri Ammon.,
3iss.

M. A tablespoonful thrice a day.

R Pulv. Calumb.
Ferri Sesquioxyd.
Sodæ Sesquicarb.
Confect. Aromat. ā ā
partes æquales.
Syrup Zinzib., q.s.
Ut ft. electuarium.

M.A teaspoonful twice a day.

CALX. Quicklime has been recommended by Randham, in the form of ointment in tinea capitis. The scalp is to be previously washed and anointed with lard, until the crusts are softened, which are then to be removed with combs or brushes. This done, the subjoined salve is to be applied twice, rubbing it in for six or seven minutes each time.

R Calcis vis, 5ss.
Tutiæ, 3j.
Axungiæ, 3iv. M. ft. Ung.—Randham.

CAMPHORA. Camphor, is placed by Dr. Young in his list of expergefacients, or medicines capable of increasing the activity of the nervous system. It is considered diaphoretic and anodyne. M. Lombard found it exercise a soothing influence on the heart's action, but is uncertain whether it be a stimulant or sedative. It is indicated in that feeble condition of the capillary system, concomitant on adynamic and ataxic fevers; as manifested by a weak tremulous pulse, loss of consciousness, delirium, subsultus tendinum, cold relaxed surface. It must be given with great caution to children, as it is apt to cause agitation and dyspnæa. It has been recommended by Wendt and Carus in erysipelas neonatorum, in the dose of $\frac{1}{3}$ gr. with $\frac{1}{2}$ gr. of calomel every two hours. Jörg, however, reprobates the practice. In malignant aphthæ, scarlatina, and virulent small-pox, with great prostration of the vital powers,

camphor may be advantageously exhibited in combination with ether, mineral acids, vegetable tonics, opium, or musk. It has also been found beneficial in the latter stages of croup, where there is much nervous depression and inability to expectorate; in the second or convulsive stage of hooping-cough; in catarrhal

diarrhœa; and in worms.

Dose. The dose for an infant is \(\frac{1}{4} \) grain; to children, from \(\frac{1}{3} \) to 1 grain. A convenient form of giving minute doses is the \(mistura \) camphor\(\varphi \), or camphor julep; which constitutes at the same time an elegant vehicle for other remedies. Of this, a dessert or tablespoonful may be ordered, and repeated at frequent intervals. Camphor externally applied acts as a rubefacient. Lentin recommends the application of a piece of flannel, impregnated with it, as a means of affording speedy relief in croup. Malgaigne has proposed the powder moistened with water, as an useful refrigerant and discutient, when laid on an erysipelatous surface. Sprinkled upon gangrenous sores it promotes the separation of the dead parts. The liniments of camphor are employed as stimulant embrocations to bruises and sprains.

The best mode of administering camphor seems to be by triturating it with milk; this fluid suspends it largely. It has been said to dissolve it; but from Dr. Coxe's experiments such does not appear to be the case (American Dispensatory, p. 467).

82.

R Camphoræ subactæ, gr.ss. Dec. Althææ, Zij. Vini Opii, gt.i—ij.

M. A teaspoonful every hour or two in infantile diarrhæa.
—Gölis.

83.

R Camphor, gr. iv.
Mist. Acaciæ.
Syrup. Althææ, āā ʒss.
Misce terendo invicem et
sensim, adde.
Aq. flor. Aurantii, ʒj.

M. A teaspoonful every two hours in malignant aphthæ.—Wendt.

R Camphoræ, gr. vi.
Mist. Acaciæ.
Syrupi, āā ʒj.
Misce terendo invicem et
sensim adde.
Mistur. Amygdalæ, ʒiv.

M. A tablespoonful every two hours to children at the second period, affected with gangrenous small-pox.—Wendt. 85.

R Saponis rasi, Zij.
Camphoræ trit. Zj.
Sp. Ammon. arom. Zss.
Ol. Rorismar. gr. xv.

M. ft. Embrocatio.

86.

R Camphoræ, 3j. Tere cum Sp. Ammon., 3iij. Solut., adde Ol. Olivar., 3ss.

M. ft. Embrocatio, in obstinate obstructions.

Hufeland.

CANTHARIS. Blistering Fly, is a stimulant and diuretic medicine. Its internal administration has been recommended by many German and certain English physicians, for the cure of hooping-cough. It is conceived to produce some modified action in the nerves, supplying the stomach and lungs; and a critical evacuation by the kidneys. It is indicated in the advanced stages of the above disorder, when ædema and other signs of constitutional weakness are present. In no case ought it to be given to very young children, to those of an inflammatory diathesis, or to those affected with irritability of

the uropoïetic organs.

Dose. The tincture is generally preferred. It may be ordered in the quantity of from two to eight drops, three or four times a day, according to the age of the child, in any bland emollient vehicle, also in chicken broth. It should be continued until it occasion an increased flow of urine, and even slight strangury. It may be advantageously conjoined with decoction of cinchona, quinine, or opium. Externally the tincture is used as a stimulant liniment with spirits of rosemary and camphor. Hufeland recommends as a mild epispastic for infants, frictions with cerate, containing from 9ij. to 3j. of cantharis to the ounce, in cases of protracted cough or recedent eruptions.

R. Cantharidis, gr. j.
 Sacchari albi.
 Pulv. Acaciæ, āā 3ij.
 Misce terendo invicem et sensim, adde.
 Mist. Amygdalæ, 3v.

M. ft. Mistura. A tablespoonful every two hours.—Fränkel.

88.

R Cort. Cinchonæ, 3ss. Aq. ferv. 3v.

Coque ad reman., Ziij. Adde.

Syrup. Althææ, 3j.

Syrup. Althææ, 31 Tinct. Canth.

Vini Opii, āā gt. xv.

M. ft. Mist. From thirty drops to a teaspoonful four times a day.—Bucholz.

89.

R Mist. Amygdalæ, Ziv. Syrupi, Zj. Tinct. Cantharid. gt. iij.

M. ft. Mist. A small teaspoonful every second hour.— Busch. 90.

R Sp. Rosmari, Ziij. Tinct. Canth., Zj.

M. ft. Linimentum.

91.

R Tinct. Cinchon. Co., 3v.

—— Canthar.

—— Opii Camph., āā Zss.

M. 3ss—3j. ter in dies.—Beatty.

CARBO ANIMALIS. Animal charcoal, has been internally given by Weise, Gumpert, and others, as a remedy in strumous enlargements of the glands. It is said to determine acne of the face, but M. Baudelocque considers it to be quite inert.

The dose is from ten grains to a scruple thrice a day, conjoined with a vegetable or milk diet. It is externally applied in poultices to correct the fœtor of ulcers.

CARBO LIGNI. Wood charcoal, was exhibited by Gölis in protracted cough, with fœtid expectoration. He ordered it mixed in equal parts with powdered liquorice, twice a day, in the dose of a teaspoonful. Hahnemann and Juch found it to remove the fœtor of dysenteric evacuations. Externally it is

applied to scrofulous sores and porrigo. If the eruption be humid, it is simply sprinkled over; if dry, it is rubbed on in the form of ointment. Here it probably acts merely as a mechanical irritant.

92.
R Carbonis Ligni, 3j.
Adipis, 3vj.
M. ft. Unguentum.

93.
R Pulv. Rhei.
— Carb., āā 3iss.
M. ft. Pulvis. For inspersion.

CASCARILLA. The bark of the Croton Cascarilla is stomachic and tonic; it checks immoderate secretion from the mucous membrane of the alimentary canal, when that depends on atony and relaxation. If inferior in tonic energy to cinchona, it is nevertheless less oppressive to the stomach, and therefore better adapted for children whose organs of digestion are feeble and irritable. Inflammatory or constipated conditions of the bowels forbid its use. Cascarilla is serviceable in flatulent colic; in the gangrenous thrushes of children; in asthenic fevers, when the powers of assimilation are sunk, the excitability of the nervous system augmented, and diarrhea is present; in infantile remittents when they approach the intermittent type and seem caused by abdominal disorder, and the preparations of cinchona are inadmissible; in the chronic and long protracted diarrhoa of scrofulous debilitated children in union with deficient tone, and morbid sensibility of the bowels; and in that state of languor and emaciation, accompanied with tumid tense abdomen, depending on obstruction of the mesenteric glands. In remittents after evacuations along Its aromatic qualities render it an with liq. acet. amm. excellent adjunct to cinchona.

Dose and form of exhibition. Cascarilla may be given in powder made into an electuary with aromatic confection and syrup of ginger to the amount of 5, 10, or 15 grains, two or three times a day; it may be also exhibited in the form of decoction or of tincture; of the former, a tablespoonful may be

ordered, of the latter from 20 to 40 drops.

R Cascarillæ, 3ss.
Aquæ, com. q. s. macera,
subinde terendo per
nycthemeron, Colatur,
express., 3viij. adde

Æther. Sulph., 9j. Syrup. Aurant., 3j.

M. From a tea to a tablespoonful every two hours.— Fränkel. 95.

R. Infus. Cascarillæ, Ziij. Tinct. Cinchonæ, Ziss. Mist. Acaciæ, Zss.

M. A tablespoonful every second hour in diarrhxa.

96.

R Aq. Cinnam., 3iss.
Infus. Cascarillæ, 3iv.
Confect. Aromat., 3ij.
Sp. Ammon. Arom. 3j.

M. A tablespoonful every four or six hours.

The extract of cascarilla is bitter without aroma. It is said to be indicated in cases of morbidly excessive secretion from the intestinal mucous membrane, when the discharges are increased from atony, and the digestive organs are at fault. Of a solution containing from one to two drachms in any aromatic water a teaspoonful may be given every two or three hours.

CASSIA. The pulp of cassia is a mild laxative, well suited to children, but, unless associated with some other laxative, it is apt to induce nausea, flatulence, and griping, according to Dr. Paris. The confections of cassia and senna are, on that account, convenient combinations for its exhibition. It is indicated in inflammatory cases, where more acrid purgatives are improper.

97.

R Pulpæ Cassiæ, 3j. Potassæ Tart., 3ij. Aq. Cinnam., 3iij. Mannæ, 3iss.

M. A tablespoonful every second hour till it answer.

CATECHU. Is a powerful astringent. It is indicated in chronic diarrhea, in relaxation of the uvula and fauces. As it possesses some tonic power it ought not to be prescribed when signs of inflammation are present. The dose is from 5 to 10 grains twice or thrice a day.

98.

R Pulveris Catechu, gr. v.—x.
Confect. Rosæ, q. s.
Ut f. Bolus mane et vespere sumendus.

CETRARIA ISLANDICA. Iceland moss, is a useful demulcent, and also possesses some tonic effect; hence its utility in pectoral ailments connected with struma. It contains 25 in the 100 of gelatinous matter; from which a kind of starch may be obtained. In prescribing it, says Dr. A.T. Thomson, the bitter should not be ordered to be wholly removed, but only as much of it as can be taken up by cold water, in which the cetraria should be steeped for twelve hours; after which the water should be decanted off and the lichen squeezed between the folds of a coarse cloth: it should then be boiled up with fresh distilled water, until the whole assume a smooth gelati-This decoction may be combined with nous consistence. some of the mineral acids, and sweetened with syrup of white poppies.

CINCHONA. Among the class of tonics or medicines capable of producing permanent increase of action and power, the different varieties of cinchona or Peruvian bark stand preeminent. Cinchona is admissible in all cases characterized by debility and unaccompanied by any inflammatory condition of the digestive canal. Its use requires a certain integrity of the functions of assimilation and nutrition in adults, and still more in children. If these be disordered it will produce squeamishness, vomiting, and diarrhæa. Hence sordes of the primæ viæ, with a tendency to diarrhæa, contraindicate its employment. Neither should recourse be had to it prematurely in the severe inflammatory ailments of childhood, as it is liable to induce undue excitement.

It is indicated in periodical disease, as intermittent fevers, ophthalmia, and neuralgia; in *erysipelas neonatorum* combined with aromatics, and lotions to the part of spirit of camphor when gangrene is threatened; in fevers and acute exanthemata of a

typhoid type, as putrid scarlatina, and small-pox; here, as its action may not be sufficiently prompt, it had best be combined or alternated with ammonia, musk, or camphor; but if a saburral state of the first passages coexist, as is frequently the case in scarlatina, great caution is to be observed in its exhibition, since it may give rise to fatal constipation or diarrhœa: in chronic cachexiæ, depending on constitutional debility, as struma, in union with deobstruent remedies, as rhubarb and certain neutral salts; in hydropic affections, depending on general atony of the organism, combined with bitartrate or acetate of potash, unless there be disposition to hydrothorax; in the advanced stage of hooping-cough, when the disease is chronic, the paroxysms few and scarcely convulsive, the secretion very copious, the strength and flesh progressively decreasing, combined with antispasmodics, bitters, and aromatics; and in chronic affection of the digestive organs, when the appetite is impaired, the pulse languid, with relaxed solids, and incapability of exertion.

Dose and form of exhibition. According to Dr. A.T. Thomson, the pharmaceutical preparations of pale bark should always be made with water acidulated with sulphuric acid, which, changing the kinate of cinchonia to a sulphate, renders the cinchonia infinitely more soluble. The dose of the powder is from 5 to 15 grains twice a day. It may be taken at first in the effervescing saline draughts. Of an infusion prepared with 3ss. in Zvj. of water, a tablespoonful may be given about an hour before each repast, to improve the appetite; as an antiperiodical, at repeated short intervals, during the whole period of the intermission. Gölis recommends fresh milk as an excellent vehicle for the decoction of cinchona, in the proportion of 3 or 4 parts of the former to one of the latter, sweetened with sugar. Underwood advises in thrush, when the eruption is of a dark colour, and the infant weak and delicate, to exhibit, after the bowels have been cleansed, the decoction of cinchona in union with aromatic confection and tincture of serpentary. In the convalescent stage of hooping-cough, the cold aqueous infusion, made by digesting an ounce of cinchona in a quart of cold water for twenty-four hours, given in the dose of a teacupful two or three times a day, has been found beneficial with the addition of 5 drops of the compound tincture of camphor to each dose.

The powdered cinchona, mixed with three parts of gum

E

arabic, has been applied externally to the ulcers remaining after the separation of the crusts in tinea capitis. Enemata prepared with 3ij. in Ziij. of water have been employed; and Stiebel proposes baths containing a quantity of the decoction, in the case of infantile intermittents.

99.

R Cort. Cinchonæ, 3j.
—— Aurantii, 3ij.
Macidis, 3j.
Infunde in vini albi, lbj.
per horas 48 cola.
M. 3j. 3iij. ter dies.—Hufeland.

100.

R Dec. Cinchon., 3vj.
Tinct. Cinchon., 3ss.
Conf. Arom., 9j.
Sp. Ammon. Arom., 5j.
Ft. Mist.

S. A tablespoonful thrice a day.—Paris.

101.

R Infus. Ros., Ziiss.
Dec. Cinchon., Ziij.
Syrup. Aurantii, Zss.
Acid. Sulph. dil., Mxv.

S. A tablespoonful three or four times a day, in apepsy.

102.

R Dec. Cinchonæ, 3ix. Tinct. Cinchonæ, Syrup. Aurantii, āā, 3ss. Potassæ Bicarb., gr. vj. M. ft. Mistura.

S. To be taken daily, in divided doses.

CINNAMOMUM. Cinnamon, is esteemed astringent and tonic, and has been found efficacious in the relief of relaxation of the bowels. It is principally used as an aromatic to cover the less agreeable taste of other drugs. The distilled water is reputed to have the power of allaying intestinal irritation. The compound powder and the tincture, offer convenient forms for the exhibition of cinnamon. As an adjunct to other remedies, the former may be prescribed in the dose of 5 or 10 grains, the latter in that of a few drops.

103.

R Aq. Cinnamomi, Zij. Aq. flor. Aurantii, Zj. Sacch. Albi, Jij. M.

S. A teaspoonful every hour, in infantile vomiting, unaccompanied with inflammation.—Wendt.

CONIUM. Hemlock, is a powerful sedative, and has been deservedly commended for its powers of allaying morbid, and

more particularly pulmonary irritation. It has been prescribed advantageously in visceral engorgements. Dr. Thomson recommends it in combination with hydrocyanic acid, in a decoction of cetraria Islandica, in cases of long protracted

hooping-cough, when much debility is present.

Dose and form of exhibition. The medicine requires to be begun in minute doses, as 1 or 2 grains, and progressively increased until its sensible effects begin to shew themselves. These are nausea, headach, drowsiness, dryness of the mouth and fauces. It is sometimes externally used in the form of poultice with emollient herbs, for the purpose of separating the crusts in tinea capitis. Hufeland recommended baths containing from two to three ounces of the fresh herb in cases of strumous eruptions and ulcers. (See EXTRACTUM CONII.)

CONTRAJERVA. The root of the *Dorstenia Contrajerva* is said to be gently stimulant and diaphoretic; and indicated in certain febrile and exanthematous diseases, and in thrush, when the skin does not act, from langour of the heart and circulating organs. The dose of the compound powder is from gr. iij. to \ni j.

104.

R Pulv. Contrajerv. Co., 3ss.
Pulv. Ipec., gr. iij.
Tere simul et distribue in chartulas, vj. æquales quarum sumat, una 4â
quâque horâ; in strophulus.—Thomson.

CRETA. Chalk, or friable carbonate of lime, when mixed with or suspended in water, is a powerful antacid. It is exhibited in affections of the stomach, accompanied with acescence, especially when there is at the same time a tendency to diarrhoea, after removing any irritant matters by previous evacuation. In children, sourness of breath, with sourness and greenness of the alvine evacuations, indicate its use. Gölis extols its efficacy in epilepsy, chorea, intermittent fever, and rachitis: in the latter disease he conjoins it with iron. It is said to increase the remedial agency of oxide of zinc and of ipecacuanha.

Dose and form of exhibition. Prepared chalk may be given to infants, in the dose of from gr. iij. to v.; to older children, gr. x. The best form is the Mist. Cretæ. It may be combined with antispasmodics, astringents, and aromatics.

R Pulv. Acaciæ, 3j.
Solve in
Aq. Fænicul., 3j., adde
Cretæ, 3ss.
Syrup. Althææ, 3j.

S. A teaspoonful every two hours in infantile diarrhæa.— Fränkel.

107.

R Cretæ, 3ss.
Antim. Oxy-Sulph. gr. iv.
Ext. Hyoscyami, gr. xij.
Sacchari Albi, 3ij.

S. A teaspoonful every two hours in infantile asthma.— Urban (Hufel. Journ. 1830).

109.

R Aq. Cinnam., 3j.
Mist. Cretæ, 3ss.
Tinct. Kino, 3ij.
Tinct. Opii, gtt. viij.
Syrup. Aurant., 5ij.

S. One to two drachms every two hours. — Evanson and Maunsell.

111.

R Cretæ, 3iss.
Pulv. Acaciæ.
Sacch. Albi, āā 3j.
Tinct. Opii, gtt. x.
Aq. font., 3iij.

S. A teaspoonful frequently.
—Dewees.

106.

R Cretæ, 3ss. Ferri rament., 3ss. Sacchari albi, 3vj.

M. ft. Pulv. To children under two years, twice a day; to children under three years, thrice a day; to children under six years, six times a day, 10 grains.—Gölis.

108.

R Cretæ.
Tinct. Rhei.
Croci, äā 3ss.
Syrup. Rhei, 3vj.
Aq. Fæniculi, 3j.

S. A teaspoonful every half hour, or every hour.—Fränkel.

110.

R Cretæ, 3iij.
Tinct.Opii,gtt.xx.vel xxx.
Ol. Cinnam., gtt. j.
Sacch. Albi, 3ij.
Aq. font. 3ij.

M. ft. Julep. A teaspoonful every two, three, or four hours; in diarrheea with acid evacuations.—Dewees.

112.

R Aq. Cinnam. Ziiiss. Mist. Acaciæ, Ziij. Cretæ, Ziss. Conf. Arom., Zj. Liq. Opii Sed.., m xv.

S. A teaspoonful every hour; in diarrhoa.

CROCUS. Saffron, the dried stigmata of the Crocus sativus, is supposed to exercise a specific action on the cerebrospinal system. It allays pain and spasm without producing constination or narcotism; and promotes the excretion of mucosity from the bronchi and intestinal tube. In small doses it acts as a stimulant to the digestive organs. In large doses it is said to prove exhilarant. Its peculiar medicinal properties are attributed by M. Henry to the volatile oil it contains. As it tends to quicken the circulation, caution must be observed in prescribing it in febrile diseases. Jahn regards crocus as the most powerful remedy for soothing nervous irritation in children; and orders it in every case of pure convulsion, more especially when affecting the respiratory organs. He has never known bad effects result from its use; and deems it to be an efficient substitute for opium, in the treatment of infantile maladies.

Dose and form of exhibition. Saffron may be prescribed to infants, in the dose of $\frac{1}{8}$, $\frac{1}{6}$, to $\frac{1}{2}$ gr.; to older children, gr. 1 to 2. It may be advantageously associated with antispasmodics and

narcotics.

R Cretæ, gr. iij.

Moschi, gr. ss. Croci, gr. j.

M. ft. Pulv. dent. tal. dos. No. vj. S. One every hour for an infant.—Fränkel.

114.

R Croci, gr. vj.
Magnesiæ ust., 3ss
Pulv. Glycyrrhizæ, 3j.
Ol. anisi, gtt. ij.
Tere simul et distribue in
chartulas, vj.

S. One, twice, or thrice a day, in convulsions.

CUPRI AMMONIA-SULPHAS. This is a tonic and antispasmodic remedy. Dr. Cullen first introduced it into practice for the cure of epilepsy. It has been found serviceable in chorea after previous purgation. The dose is 4 grain gradually increased to 3 gr., or as much as the stomach will bear with impunity, twice or thrice a day. It ought never to be given on an empty stomach. An ammoniacal compound, with copper, has been employed with advantage in scrofulous affections, by M. Baudelocque. It is known in Germany as the "Liquer of Köchlin." It is prepared as follows: take of copper filings 3j., and water of ammonia, 3iss; digest together until the liquid has assumed a blue colour; then decant and set

aside for use. Take of this solution \(\frac{7}{3}i \), of muriatic acid, \(\frac{5}{3}v \), and of water, lb. xiij.; and mix the whole together. The dose of this mixture is a teaspoonful once a day after the principal meal, followed by an ounce of wine, sweetened with sugar, for children from three to eleven years old.

115.

R Cupri Ammonia-Sulph. gr. xv. Aq. Cinnam., Zj. Solve.

S. Commence with five drops twice a day, and gradually increase the quantity.—Niemann.

CUPRI SULPHAS is endowed with properties similar to the above, in small doses; and in large doses is emetic. It exercises a tonic and astringent power on the nerves of the intestines, in ulceration of, and morbidly increased secretion from, their mucous membrane. It also checks excessive mucous secretion from the mucous lining of the bronchial tubes and cells. In these cases it ought to be combined with opium. It has recently been much extolled in Germany as a remedy in croup. Hoffmann was the first who prescribed it in that complaint instead of calomel. During the prevalence of epidemic croup he gave it in cases of bronchitis and tracheitis, in the dose of \(\frac{1}{4} \) to \(\frac{1}{2} \) gr., according to the age of the child, at intervals of two hours. Were laryngitis present, he ordered the sulphate of copper, in the dose of 3 or 4 grains, after depletion, in order to excite vomiting, and followed it up with the above small doses every quarter or half hour. After him, several other medical practitioners have successfully pursued the same line of treatment. Dr. Serlo (Hufeland's Journal, Bd. 78), cured several cases of croup by its means. To an eighteen months' child he gave in the first instance, to provoke emesis, 3 gr. of sulphate of copper, with 6 gr. of sugar; and then every two hours, 4 gr. with 5 gr. of sugar. To a child aged two and a half years, he gave in like manner, first of all, 3 gr., and then \frac{1}{2} gr. every two hours: from 25 to 30 grains were generally consumed in the course of cure. Hufeland strongly recommended the use of copper, in conjunction with leeches and enemata, in the same ailment. In commenting upon some observations on the efficacy of sulphate of copper, in croup, by Dr. Droste (Heidelberger Klinische Annalen, Bd. 10, 1834), Harless observes, that without calling in question the utility of

the remedy in the instances cited, calomel, in virtue of its power of resolving plastic formations, ought ever to take the first place, in the marked catarrho-inflammatory forms of croup, or where the effused lymph is firm and membraneous. Korting (Hufeland's Journal, Bd. 79, 1834), gave to a ten months' child a teaspoonful, every hour, of a subjoined mixture (116); the child puked after each dose and recovered. three years' old child he administered, every hour, and by and by, every two hours, half grain doses. Dr. Dürr (Würtemb. Medizin. Conversationsblatt, 3 Jahrgang, 1834), exhibits to children aged one year and nine months, 1 gr.; to those four years old, $\frac{1}{6}$; and to those of seven years, $\frac{1}{4}$ gr.: at first every quarter of an hour, and so soon as free vomiting is induced, every hour and a half, or two hours. He gives at the same time a linetus, composed of Ol. Amygdal. Vitell. Ovi, āā 3ij., Syr. Althææ, Ziss. S. Dose, a teaspoonful. Fränkel.

Dose and form of exhibition. The sulphate of copper is given internally to infants during the first twelvemonth, in the dose of 1-1 gr.; to children under four years, 1 gr.; and to older children, ½ gr., every quarter to every second hour, in solution. If it be the intention to determine vomiting, then 2 to 3 gr. may be given at once, and afterwards fractional quantities, every alternate hour. The same end is attained by giving the fractional doses every quarter of an bour at the commencement; and as soon as vomiting has taken place, at the interval of one and a half or two hours. The addition of syrup to the solution of sulphate of copper is likely to impair its energy, since sugar has the power of decomposing various cupreous salts. Externally, the sulphate of copper is applied as an escharotic to fungous granulations; and in the form of lotion (1-4 grains to the ounce of distilled water), in torpid ulceration and chronic ophthalmia. A linetus, containing from 10 to 30 grains of sulphate of copper in an ounce of honey, recently prepared, acts most beneficially, as a local application, in the treatment of aphthæ, muguet, cancrum oris, ulcerated sore throat, &c.

116.

R Cupri Sulphatis, gr. v. Dec. rad. Althææ, 3iss. Syrup Althææ, 3ss.

S. A teaspoonful every hour to a ten months' child. Korting.

117.

R Cupri Sulphatis, 9ss. Solve in Aq. destill., 3x.

M. f. Lotio.—White.

CUSPARIA. Angustura bark, is stimulant and tonic. It does not, like cinchona, oppress the stomach; but imparts a feeling of warmth, expels flatus, and augments the appetite for food. In large doses it creates nausea. It is indicated in convalescence from fevers and in chronic dysentery and diarrhœa. It may be usefully combined with rhubarb or ammonia.

Dose and form of exhibition. The dose of the powder is from 3 to 10 gr. Of the infusion, from one to two table-

spoonfuls.

R Aq. Cinnam., \(\frac{7}{3} \) iss.
Infus. Cuspariæ, \(\frac{7}{3} \) ij.
Tinct. Rhei, \(\frac{5}{1} \) ij.
Sp. Amm. Arom.
Confect. Arom., \(\tau \) ä\(\frac{7}{3} \) i.

S. One or two tablespoonfuls twice a day.

CYDONIA. The mucilage of the quince, is much esteemed as a demulcent remedy in aphthous states of the mouth; in ophthalmiæ, when the discharge is acrid and pungent; in erysipelas, to allay the sense of heat; and as an enema in diarrhæa.

DAUCUS. The seeds of the carrot, especially of the wild variety, have rather a warm pungent taste, and an agreeable aromatic smell. They are carminative and said to be diuretic. An aqueous infusion has been found useful in relieving infantile ischuria. The carrot-root beaten to a pulp forms an excellent poultice for ill-conditioned sores. It allays pain, checks suppuration and fætor, and softens their callous edges.

DIGITALIS. Foxglove, is a direct sedative, diminishing the frequency of the pulse, the general irritability of the system, controlling the capillary circulation, and augmenting the urinary discharge. It is indicated in inflammatory affections of membranous tissues, in which there is a disposition to serous effusion or plastic exudation, after the tension of the vascular system has been previously subdued by depletions. Such are infantile meningitis, hydrocephalus, inflammation of the pleura, &c. In anasarca, occurring in pale and relaxed habits connected with cardiac disease, and in the dropsy following scarlatina, digitalis has been found useful, when combined with

other diuretics, as squill, bitartrate of potash, liquor ammoniæ acetatis. Gölis did not find it to answer the expectations he had been led to anticipate from its employment in hydrocephalus acutus. Jörg objects to its exhibition in cerebral inflammation, inasmuch as its primary action is that of a stimulant to the brain, and it only exerts its depressing influence on the vascular system secondarily. But Dr. Cheyne speaks favourably of it in hydrocephalus, and has instanced two cases in which it seemed to be of use. Digitalis, in combination with calomel, has been found of service in certain spasmodic diseases, determined by encephalic extravasation. It is indicated in hooping-cough, when the vascular system is excited, when there are slight attacks of hæmorrhage, when the concomitant febrile symptoms are of unusual duration, when the urine is scanty and high coloured, and the skin dry and hot. (Wendt.) strumous hectic, glandular enlargements, and pectoral diseases, and in chronic inflammation of the mucous membranes, digitalis, in union with mercurials and antimonials, has often proved of advantage, according to Fränkel.

Dose and form of exhibition. Digitalis is administered internally, to children under a year, in the dose of $\frac{1}{8}$ th $-\frac{1}{4}$ grain two or three times a day; to children more advanced from 4-½—1 grain as often. A weak infusion made with from viij. grains to 9ss. in Ziij.—Ziv. of water is an eligible form for children. Of the filtered liquor a teaspoonful may be given every two or three hours to a child from two to four years old. Dr. Cheyne prescribes the tincture beginning with ten drops, and to every succeeding dose, generally given after an interval of four hours, he adds two or three drops more than was contained in the preceding one; so that, in a day or two, some part of the system may be affected. He has thus given as many as 120 drops a day to a child only four years old. thinks, says Dr. Joy, from whom we have quoted his practice, that the slow irregular pulse from digitalis may be distinguished by its smallness and sharpness from that of hydrocephalus, which is not only unequal, but more soft and full. We are disposed, however, to regard the infusion and expressed juice as the best forms for administration. When the medicine begins to act it gives rise to a feeling of nausea and languor. It is a cumulative medicine. If, therefore, under its use the pulse suddenly becomes very feeble, irregular, and slow, and there be frequent recurrence of dimness of sight or blindness for a minute or

two at a time, it ought to be immediately intermitted, and stimulants, wine, soup, &c. substituted. For its more violent effects the best antidotes are brandy and water, or infusion of serpentary, and a blister to the pit of the stomach. When it occasions irritability of the stomach, trinitrate of bismuth, oxide of zinc, or effervescing draughts are to be given. If it purges, its diuretic virtues will be lost, and, under such circumstances, it must be conjoined with opiate confection. According to M. Lombard, the best medicines for counteracting or allaying the symptoms of saturation, are calcined magnesia, trinitrate of bismuth, subcarbonate of iron, or oxide of zinc; of these iron is the best.

To promote diuresis the patient should drink freely; and to secure the action of digitalis on the circulation the patient ought to maintain the recumbent posture. Mr. Hamilton found the pulse reduced to 40 in the horizontal position, but becoming 100 on standing up. (On Digitalis, London, 1807.)

Some continental writers recommend external frictions over

the scalp, with the tincture of digitalis along with squill.

119.

R Calomelan, gr. iv.
Pulv. Digitalis, gr. ij.
Sacchari Albi, 5ij.
M. ft. Pulvis divid. in xij.
partes æquales.

S. A powder every two hours in infantile convulsions depending on internal disease.— Wendt.

R Pulv. Digitalis, 9ss.
Inf. in s. q. Aq. per ½
hor. Colatur, 3iij. adde
Vin. Antim., 5j.
Syrup. Althææ, 3j.
M. ft. Mist.

S. A teaspoonful every second hour to a child of three or four years in florid scrofula.-Wendt. 120

R Calomelan, gr. xij.
Pulv. Digitalis, gr. iij.
Sacchari albi, 3ij.
M ft. Polyis divid. in xii

M. ft. Pulvis divid. in xij. partes æquales.

S. A powder every second hour to a child from one and a half to three years old, in the advanced stage of hydrocephalus acutus.—Wendt.

122.

R Infus. Digitalis, 3j.
Aq. Cinnam., 3iss.
Potass. Acet., 5iss.
Tinct. Opii, gr. iij.
Syrupi, 3iij.
M. ft. Mist.

S. A teaspoonful every two, four, or six hours.

R Pulv. Digitalis, 3ss. Calomelanos. Sacchari albi, āā, 5j.

S. Dose. One grain.

DOLICHOS. The bristles of the pods of cowhage, are employed medicinally as an anthelmintic for the expulsion of the lumbricoides, and long thread-worm. They seem to act by mechanical irritation, and require to be aided by purgatives. The dose is from gr. v.—x. given in the form of electuary with honey or syrup.

DULCAMARA. The twigs of the solanum dulcamara or woody night-shade are considered to possess diuretic and narcotic properties. In large doses, dulcamara is said to increase all the secretions and excretions, to excite the heart and arteries; in still larger doses to produce nausea, vomiting, vertigo, dilatation of the pupil, slow intermittent pulse, and convulsions; for these symptoms the antidote is carbonate of potash. The decoction has been prescribed with advantage in lepra, and some other forms of cutaneous affections.

Gölis recommends the extract of dulcamara in catarrhal diarrhœa, and in pulmonary catarrh attacking infants. Gabillot, (Compte rendu des travaux de la Société de Médecine de Lyon, 1831,) gave the extract, (to the amount of \ni i, dissolved in

water in the 24 hours,) with success in hooping-cough.

The dose of the decoction is from one to two tablespoonfuls, twice or thrice a day.

124.

R Ext. Dulcamaræ, gr. viij. Dec. Althææ, 3iij. Vini Opii, gr. ij. Syrup. Althææ, 3ss. M.

S. A teaspoonful every hour.
—Gölis.

125.

R Dec. Althææ, Əiij. Ext. Dulcamaræ, Əss. Vini Opii, gr. ij. Oxymellis, 3iij. M.

S. Dose, a teaspoonful in protracted cough, for a child of two years.—Gölis.

EXTRACTUM BELLADONNÆ. This preparation has been employed, according to Fränkel, in the following diseases of childhood.

As a prophylactic against scarlatina, Hufeland, Zeuch, Gumpert, Berndt, Pittschaft, and others after Hahnemann, demonstrated, by the result of numerous trials, the preservative power of belladonna against that formidable disease. gave it, however, in larger doses than Hahnemann proposed, and continued it for a length of time, in order to produce such an influence on the organism, as would annul the susceptibility to contagion. Dr. Hillenkamp, (Hufeland's Journal, 1832,) employed the belladonna during the prevalence of an epidemic; and, out of 120 children so treated, only five became ill. Dr. Serlo, in like manner, bears testimony to a similar result. Dr. Kaiser, (Heidelberger Jahrbücher, 17 Bd.) deduced the following facts from experiment: small doses of belladonna protect the individuals from contagion, but do not prevent the development of the disease in those already sickening for it, nor in any degree mitigate the symptoms. Lehmann, Wagner, Randel, and others, however, deny any such virtue to belladonna: and, seeing that it is rather a dangerous medicine for children, it might perhaps be as well to restrict its administration to those malignant epidemics which justify medical practitioners in resorting to the boldest expedients for counteracting contagion. While using belladonna, Dr. Kühlbrand (Casper's Wochenschift, 1833,) advises the forehead and temples to be washed night and morning with camphorated vinegar, in order to prevent its noxious effects.

2. In hooping-cough; however great the reputed efficacy of belladonna may be in combating this disease, its employment requires the utmost circumspection. Wendt says that it demands more careful watching than any other remedy, since it may promptly induce a powerful and uncontrollable influence over the vital sensibility of the child. The experienced Gölis. in like manner, assures us that if improperly employed it will determine in cerebral congestion, coma, and death. children it ought never to be pushed so far as to cause dryness of the throat, muscæ volitantes, or other signs of narcotism: neither ought it to be given to robust plethoric children, nor during the persistence of fever. It is a prime condition, says Wendt, that belladonna must never be prescribed in hoopingcough, so long as any febrile movement exists; only in the chronic and advanced stages is its use admissible. (Medical Gazette, 1831,) has recorded several cases of the value of extract of belladonna, as a remedy in this disease.

3. In scrofula; belladonna seems to influence the functions of assimilation and nutrition, and has therefore been found useful in glandular engorgements. Hufeland recommended it in obstinate swellings of a glandular nature, in rebellious and callous ulcers, in convulsive diseases connected with struma.

4. My friend Dr. Fergus informs me that 15th of a grain, given every two hours, is an efficacious remedy in erysipelas of

e face.

Dose and form of exhibition. Internally, for the reasons above specified, the extract of belladonna ought to be given in minute doses; to infants under two years ath of a grain; to children from two to four years, ith of a grain three or four times daily; to those more advanced 10th - 12th grain several times a day. Should, in consequence of too large a dose, signs of narcotism show themselves, an emetic of sulphate of zinc may be administered, followed by small doses of ether, and the application of a mustard poultice to the pit of the stomach. the evacuation of the poison we may exhibit vegetable acids, as vinegar. If there be violent delirium the head ought to be leeched and covered with cold stupes. The extract of belladonna has been found serviceable as an external application Pieper, (Harless, Rheinische Jahrbücher, Bd. 10, 1825,) entertaining the opinion that hooping-cough has its seat in the ganglionic system, orders the belladonna to be rubbed over the præcordial region. For infants of six months, he commences with 1½ grain, and gradually increases the quantity; in older children he commences with a larger proportion. He states that friction, with belladonna, promotes alvine discharge, sleep, intermission of cough, and freedom of respiration.

Hahnemann dissolves three grains of the extract in an ounce of distilled water, and gives two or three drops twice a day to a child under a year old, and one drop more for every year additional, during the time of exposure to infection from

scarlatina.

126

R Ext. Belladonnæ, gr. ij. Aq. Cinnamom., Zj. M. ft. Mist.

S. As many drops to be taken twice a day as the child has years.—Hillenkamp.

127.

R Ext. Belladonnæ, gr. j. Aq. Distil., \(\)\(\)j. M.

S. To infants 5, and to children from two to four years 10 drops, four times daily, in hooping-cough.—Wendt.

R Ext. Belladonnæ, gr. iij. Aq. Destillat., Zj. Sp. Vini Rectif. Jj. M.

S. To be given as the above.

—Hufeland.

130.

R Ext. Belladonnæ, gr. j. Solve in

Aq. flor. Aurantii, Ziv.
Adde
Sp. Vini Rectif Zi

Sp. Vini Rectif., 3j. Syrup. Simpl., 3ss, M.

S. To infants half, and to older children, a whole teaspoonful, morning and evening.

—Pittschaft, Gumpert.

129.

R Ext. Belladonnæ

— Hyoscyami, ââ, gr.

iii.

Oxymell. Scillæ, 3ss. Syrup. Althææ, 3ij. M.

S. A teaspoonful every two hours to a child of eight years, in hooping-cough.—
Phöbus.

131.

R Ext. Belladonnæ, gr. j. Aq. Destillat., Ziv. M.

S. A dessert-spoonful every two hours, in erysipelas.

EXTRACTUM CINCHONÆ. This is an excellent tonic,

for restoring appetite in children.

Dose and form of exhibition. It may be given in aqueous mixture in the proportion of from 5j.—3ij. dissolved in 3iij.—3iv. of water, in the dose, to infants, of a teaspoonful, and to older children a dessert-spoonful several times a day, in combination with diffusible stimulants, aromatics, and antispasmodics. Externally it is applied in the form of linetus to gangrenous sores, gangrenous angina, &c.

132.

R Extr. Cinchonæ.

— Hæmatoxyli, āā, 3j.
Boracis, 3ss.
Solve in
Decoc. Salep. ten. 3iv.

S. A teaspoonful every hour, in malignant aphtha.-Lentin.

Syrup. Althææ, Zj. M.

133.

R Extr. Cinchonæ, Ziij Camphoræ. Cantharidis, āā, Đj. Tere simul ut fiat pulvis.

Dose. 8 grains every third or fourth hour, in hooping-cough.—Burton.

R Extr. Cinchonæ, 3ij.
Aq. Cinnamomi, 3ij.
Sp. Ætheris, Sulph., 9j.
Tinct. Opii, gtt. x.
Syrup. Aurantii, 3j. M.

S. A teaspoonful in the advanced stages of small-pox and hooping-cough to a child from five to seven years old.—Henke.

EXTRACTUM CONII. This preparation is said to exercise a particular influence on the functions of vegetative life; being chiefly directed to those of the lymphatic and glandular system. It has been employed in the following

ailments of childhood.

1st. In scrofula. Conium is less apt to affect the nerves than opium or belladonna, or to disorder the process of digestion. It has neither heating nor stimulating properties, and therefore seems adapted to scrofulous affections of an irritable character, more especially of the skin. In strumous ulceration of the glands, conium manifestly improves the nature of the discharge. It acts no less beneficially in ophthalmic blenorrhea, and in pulmonary catarrh. It is said to favour the resolution of glandular enlargements, but at the same time increases the puriform secretion, and ought therefore to be administered with caution in diseases of internal parts, especially of the mesenteric glands. In scrofulous photophobia, Dzondi recommends the extract of conium in increasing doses; he begins with two or three grains thrice a day, and progressively augments the dose by one grain up to seven or twenty-one days, when it will have fulfilled the desired indication. In conjunction with the above treatment we may apply collyria of cherry-laurel water, and give small alterative doses of calomel or hydrarg. c. cretà at bedtime.

2d. In hooping-cough. The extract of hemlock is celebrated for its powers of allaying pulmonary irritation; hence its utility in this disease. According to Fränkel it checks expectoration which is an objectionable circumstance. Jahn prescribes it only in the second and third stages of the disease. Schlesinger, (Hufeland's Journal, Bd. 40,) extols the combination with tartar emetic as very useful in hooping-cough.

Dr. Paris has given it with advantage in pneumonia, where the patient was too weak to bear bleeding; and in

measles, combined with tartar-emetic.

The extract of conium may Dose and form of exhibition. be given internally to infants in the dose of ½ a grain; to children between the ages of two and four, 1 grain; to those between four and eight years, 2 grains, three or four times a day, gradually increasing the dose, either in the form of powder or solution, (9j. dissolved in 3ss. of water, 5-10-20 drops = $\frac{1}{2}$ - 1 - 2 grains twice a day.) It may be combined with laxative, deobstruent or alterative remedies. nally recommended in union with cinchona as an application to scrofulous sores.

135. R Ext. Conii. Ext. Hyoscyami, āā, gr.v. Mist. Acaciæ, 3ij. Tere simul, donec quam optime misceantur, et dein, adde. Liq. Ammon. Acet. Aq. Puræ, āā, ʒss. Syrup. Rhæados, 3j.

M. ft. Mistura, S. A teaspoonful frequently when the cough is troublesome.—Paris.

R Calomelan.

137.

Antimon. Oxysulph. ãā, gr. j. Extr. Conii, gr. j. Sacch. Albi, 9j. M. ft. Pulv. dent. tal. dos. No. xij.

S. To infants under two years half a powder morning and evening; to children upwards of that age a whole powder, gradually increasing the proportion of hemlock .-Fränkel.

136.

R Decoc. Cetrariæ, 3xj. Vini Ipecacan., Zij. Extr. Conii, 9j. Olei Anisi, mxij. Syrup. Althææ. Syrup. Papav. āā, 5iij. M.

S. A dessert-spoonful three or four times a day .- Copland.

138.

R Extr. Conii, gr. ij. Antimon. Potass. tart. gr. j. Aq. Destill., Zij.

Syrup. Croci, 3ss.

S. To be taken in the course of two days by an infant; in hooping-cough.—Schlesinger.

R Extr. Conii, 3j.—3iss. Aq. Cinnamom. Syrup. Aurantii, āā, 3ss.

S. 20-30 drops twice a day.

Feiler.

141.

R Extr. Conii, gr. iij.—vj. Aq. Menth. vir., Žij. Tinct. Rhei, Co., Žj. M.

S. A dessert-spoonful thrice daily, in scrofulous mesenteric disease.—Hecker.

140.

R Extr. Conii, 3j. Aq. Cinnamom., 3ss. M.

S. 5 drops thrice a day gradually increasing it 5 drops each day, until the dose be 20 or 30, in scrofulous intolerance of light.—Kopp. Schindler.

142.

R Pulv. Cinchonæ, Zj.
Coq. c. s. q. Aq. per
hor. in Colatur, lbi.
solve.

Extr. Conii, 9j.

S. To be applied externally.
—Frankel.

EXTRACTUM HÆMATOXYLI. Is a mild astringent, useful in chronic diarrhea, and in gangrenous aphthæ when combined with cinchona. Of a mixture containing 3j. in 3j. of water, a teaspoonful may be given to an infant, and a dessert-spoonful to an older child. It ought never to be united with lime-water nor chalk mixture. See Hæmatoxylum.

143.

R Dec. Cinchonæ, ǯiij. Ext. Hæmatoxyli, ȝj. Aq. Cinnamom. Syrup. Aurant., āā, ǯss. M.

S. A dessert-spoonful every hour, in diarrhæa.

EXTRACTUM HYOSCYAMI. Henbane is a narcotic which has been considered analogous to opium in its effects. It is a sedative well adapted for children, inasmuch as it is not apt to produce irritation or acceleration of the pulse, nor to interrupt the secretions and excretions, like opium; indeed it rather tends to relax the bowels. It may be given with advantage in the inflammatory and febrile disorders incident to dentition; and particularly when the febrile state is attended with pain and convulsion. It may be ordered in fits in union with oxide of zinc; in catarrhal cough along with demulcents and laxatives, as gum

arabic, manna, &c.; in inflammation of the air-passages, as aft adjunct to antiphlogistic remedies; in conditions of inflammatory erethism generally, in combination with calomel, after previous depletion. Dr. Tribolet, of Bern, in a paper published in the 43d volume of Hufeland's Journal, recommends the extract of henbane in large doses, in the inflammatory diseases of children, and more particularly croup. He gave to a three years' old child, labouring under that disease, 20 grains in the course of three hours; to an infant of two years, 26 grains in five hours. In the last case, there followed distension of the abdomen, apparent paralysis of the lower extremities but no stupor. These symptoms soon went off. He advises the extract of henbane to be administered in croup prior to the formation of the plastic concretions, otherwise it is injurious. To children, between two and three years of age, he orders 2 grains at least every two hours. He gives, in addition, antimonial wine, and applies sinapisms and blisters to the extremities.

In large doses it acts as a virulent poison, producing nausea, stupor, dimness of vision, dilatation of the pupils, delirium, coma, tremulous pulse, cotd sweats, and frequently death. Under such circumstances, no time ought to be lost in evacuating the stomach and afterwards rousing the habit by ammonia aud cordials.

Dose and form of exhibtion. The extract of henbane may be given to children at the breast in the dose of a $\frac{1}{4}$ of a grain; to older children in that of $\frac{1}{2}$ a grain, or a grain, three or four times in the day. In cases of cramp, spasms, or convulsions, it may be combined with ipecacuanha or James's powder; and according to Dr. A. T. Thomson, if much languor be present, with serpentaria. It may be prescribed in the form of solution, linctus, or emulsion.

144.

R Aq. Fæniculi, 5iv. Vini Antimon., 3j. Extr. Hyoscyam., gr. iij. Syrup. Althææ, 3iss. M.

S. A teaspoonful every two hours to an infant from six to twelve months, as a cough mixture.—Vogt.

145.

R Ext. Hyoscyami, gr. v. Aq. Menth. pip. Aq. Cinnam., āā, 3ss. Tinct. Valerian. Co., gtt. xx.

M. Sit. Mistura.

S. A teaspoonful or two, every hour, in flatulent colic and spasms.

R Extr. Hyoscyami, gr. x. Vini Antimon. 3ij. M.

S. 8 drops four times a day to an infant a year old, in hooping-cough.—Hufeland.

EXTRACTUM LACTUCÆ. The Lactuca sativa and L, virosa afford a juice, which, when inspissated, has been called lactucarium. Lactucarium possesses sedative properties, resembling in some respects opium. It has been found useful by certain German physicians in diseases of the chest and abdomen; when continued for some time it augments the urinary discharge and the perspiration, loosens expectoration, and occasions numerous alvine evacuations. It is chiefly exhibited in convulsive affections of the respiratory organs with depraved conditions of the bronchial secretion; in spasmodic croup; in hydrothorax complicated with spasms; and in In the last-named disease it abates the hooping-cough. intensity of the paroxysms, and if it do not shorten, at all events renders its progress less violent. Lactucarium has the advantage in common with henbane of being compatible with states of febrile and vascular excitement; which is not the case with belladonna.

Dose and form of exhibition. The dose of lactucarium is very indefinite; some practitioners giving it in large, others in small quantities. Krukenberg, (Klinische Jahrbücher, Bd. 1,) thus fixes the dose: to a child from three to six months old he gives ½ agrain in the day in three portions, that is to say ½th of a grain as a dose,—after a fortnight it is increased to 2 grains; to children from one to three years old he gives ½ a grain four times a day, and gradually increases it; to children above six years of age he gives from 1 to 6 grains, thrice daily. Meyer, (Annalen für die gesammte Heilkunde, Karlsruhe,) recommends the combination with oxide of zinc as extremely efficient in hooping-cough, (Fränkel, p. 148.)

147.

R Extracti Lactucæ, Əss. Aq. Lauro-cerasi, Ziss. M. Sit. Mistura.

S. 5—10 drops every four or six hours.—Fränkel.

R Ext. Lactucæ vir. gr.iij.

Sacchari lactis, 3ij.

M. ft. pulvis divid. in partes æquales, No. xij.

S. One four times a day.— Fränkel. EXTRACTUM OPII. This, the watery extract of opium, is deemed to be preferable to the other preparations of the drug, when it is essential that its use should be persevered in for some time. On this account Cruveilhier has directed it to be given in that infantile disease, which he has so well described, the gelatinous softening of the stomach and intestines. He orders a teaspoonful every second hour of a solution of \(\frac{1}{4} \text{th} \) of a grain in \(\frac{3}{2} \text{iij} \). of water; and at the same time, twice in the day, starch enemas, containing \(\frac{1}{8} \text{th} \) of a grain of opium. For a detail of the precise circumstances under which opiates are admissible in the treatment of the diseases of childhood, see Opium.

EXTRACTUM PAPAVERIS. Extract of poppy, is much less apt to induce cerebral excitement and congestion than opium. It may be employed for the purposes of allaying pain and general uneasiness, and procuring sleep. The dose for an infant is from a ½ to ½ a grain every three or four hours; for a child of three or four years old it is 1—3 grains. According to Dr. A. T. Thomson, it is merely an inferior preparation of

the gummy extract of opium.

Fomentations made with extract of poppy diffused in hot water, and poultices consisting of the same fluid and crumbs of bread are beneficial, according to Dr. Merriman, in infantile erysipelas. The late Dr. Clarke has recommended in cases of great irritation, where we wish to guard against the inconveniences of giving opiates internally to children, half an ounce of the extract of poppy diffused in a quart of decoction of camomile flowers to be applied as a fomentation by means of a flat sponge, which retains the heat longer, and does not part with the fluid.

EXTRACTUM TARAXACI. Extract of Dandelion, is tonic and deobstruent. It is esteemed an efficacious remedy in scrofula, in the mesenteric disease of infants, and in the congestions of the abdominal viscera consequent upon intermittent fevers. Sir James Clark considers taraxacum a very valuable medicine in tuberculous constitutions, from its power of diminishing abdominal plethora, and its especial influence on the urinary and biliary secretions. Here, after a few doses of mercurial alteratives, a course of taraxacum, steadily pursued for several weeks during the spring or summer, will often

produce a very beneficial effect. He usually prescribes it in combination with some tincture of hops and aromatic water, and in this form finds no difficulty in getting children to take it. The bowels require attention, and during its use an occasional laxative will be beneficial in all cases, (Treatise on Pulmonary Consumption, cap. xiii.) Dr. Pemberton prescribed it in union with sulphate of potash and spearmint water. From 2 scruples to 2 drachms of the extract may be taken in the day. The inspissated juice, one-half the strength of the above, may be obtained, well prepared, from Mr. Squire of Oxford street.

149.

R Ext. Taraxaci.
Conf. Sennæ.
Potassæ Bitartratis, āā,
partes æquales.
Syrupi Aurantii, q. s. ut
fiat electuarium.

S. A small teaspoonful twice or thrice daily, to children above two years.

150.

R Ext. Taraxaci, 3iss. Aq. Fœniculi, ℥iij. Tinct. Rhei. Syrup. Aurant., āā, ℥ss.

M. A tablespoonful thrice a day.

151.

R Ext. Taraxaci, 3ij. Infus. Rhei, Ziiiss. Mannæ, 3ij. Tinct. Sennæ, 3iss. M

S. A tablespoonful at noon and evening, to a child of three or four years old.

FARINA. The flour of wheat, (Triticum hybernum,) under various forms, constitutes an approved article of infant diet. An excellent pap may be prepared thus: to two-thirds of a pint of new milk, after it has stood for six hours, add one pint of water, and when nearly made to boil, put in a spoonful of flour and a little salt, previously moistened, so as to form a paste; let the whole be well stirred till near ebullition, when it may be poured out ready for use. Infant's food should never be warmed more than once after it is first made. Dr. Underwood states that, in purging, baked flour, mixed with boiled milk, is admirably calculated, both as a proper diet and medicine. (Op. cit., p. 53.)

Flour is externally employed as a dusting in erysipelas and burns. It ought never to be applied to secreting surfaces, as the conjoint agency of warmth and moisture speedily induces fermentative changes, which destroy its therapeutic value, by imparting to it irritant qualities.

FEL TAURI (RECENS). Bilis Bovina, ox-gall has been recommended, joined with Venice soap and arum root, as an internal remedy in cases of constipation, by Risenstein and Jahn. Dr. Copland speaks favourably of it as a medicine in certain disorders of the bowels attended with diarrhea. dose is a few grains.

Externally it is employed as a liniment along with the soap or camphor liniment. And it is said to be a powerful resolvent and discutient, in internal and external scrofulous indurations; and in atrophy from induration of the mesenteric glands when rubbed on the abdomen. Frictions with it and oil of tansy are said to promote the evacuation of worms.

FERRUM. The propitious agency of iron in its various chemical forms in removing morbid relaxation of the moving fibres, as indicated by general flaccidity of the flesh, sense of debility, by feeble pulsations, either unusually rapid or slow, pale and bloodless complexion, dull eyes, sunk features, and an emaciated frame, is universally acknowledged. Its constitutional effects, which take place without any sudden action, are chiefly observed in the vascular and muscular system. however, the pulse becomes sensibly raised, the colour of the face, before pallid, assumes a florid tint, and the alvine, urinary, and cuticular secretions are increased, digestion is promoted, and edema, if present, disappears. When pushed too far iron acts as a powerful excitant. There are throbbing of the cerebral vessels, pain in the head, and an inflammatory condition leading to hæmorrhage induced. Hence, as a strengthening remedy, it requires to be given with great circumspection to children, from the tendency it has to promote the circulation in the head, by increasing the action of the heart in a greater degree than the strength of the digestive organs. regards local action, ferruginous preparations constringe the parts with which they are in contact, and thereby diminish secretion and check sanguineous discharge.

They are indicated in cases where the patient seems to be labouring under general anæmia; where the blood is deficient in quantity, and consequently the vital force and temperature

Ferrum. Ferri Ramenta.

are diminished. They are prejudicial, during the existence of irritation or inflammation of the alimentary canal; in subjects of an inflammatory or a plethoric habit prone to congestion; and during a constipated or a saburral condition of the intestines, or a tendency to sub-inflammatory affections of the lungs. Hence, in no instance ought they to be ordered until we have satisfactory evidence that pre-existing irritation of the gastric system has been removed or greatly abated, and that the functions of the whole chylopoietic viscera are in a normal state. Where the powers of digestion are feeble, the medicine may be combined with aromatics, and its action seconded by free exercise in the pure air. In children it is advisable to commence with small doses of the mildest chalybeates, administered on neither an empty nor a full stomach. Darkcoloured evacuations and fetid eructations are the index of their having taken effect.

The ferruginous preparations are exhibited in the following

diseases of children:

In struma, and rachitis, characterized by feebleness and inertia of the different organs of the body,—leucophlegmatic state of the system with a disposition to serous and mucous profluvia. There, if, after an appropriate antiphlogistic and alterative course, we find the persistent glandular and visceral obstructions dependent on, or connected with, mere want of tone, iron, by imparting energy and vigour to the constitution, exerts a salutary agency. In mucous discharges from the urethra or vagina, in hydropic and other diseases of the joints, and in the incipient stages of tubercular phthisis and mesenteric disease, when no hectic is present, iron is of signal utility.

In all cachectic diseases, when the circulating fluids are impoverished or deprayed, chalybeates invigorate the absorbent system, enrich the blood and render it subservient to the

plastic processes of vegetative life.

In verminous complaints, especially in the case of the small thread worm, (oxyuris vermicularis,) after previous alvine evacuations, iron is the best remedy for strengthening the muscular and mucous coats of the intestinal canal, and destroying the disposition to the reproduction of these entozoa.

FERRI RAMENTA. Iron filings, may be exhibited in all cases where chalybeates are indicated; in febrile conditions of the alimentary canal accompanied with acidity, flatulence, and

diarrhœa, and in mucous discharges from the genital organs. Its general and anthelmintic virtues are heightened, by conjoin-

ing it with aromatics and bitters.

Dose and form of exhibition. To children under two years from $\frac{1}{2}$ a grain to 2 grains may be given three times a day; and from 2 to 5 grains, as frequently, to children between the ages of two and four. It may be taken in honey, alone, or combined with rhubarb, magnesia, &c.

152.

R Ferri rament., gr. iij—xij. Conch. ppt. Oleo. Sacch. Citr. āā, 3ss.

M. ft. Pulv. divid. in vj. partes æquales.

S. A powder twice a day, in rachitis.—Behrends.

154.

R Ferri rament.

Pulv. Rhei.

— Cinnam. āā, gr. j.

Magnes. Carb. gr. ij.

Sacch. albi, Əss.

M. ft. Pulvis. dent. tal. dos.

No. vj.

S. A powder morning and evening.—Frankel.

153.

R Ferri rament. Conch. ppt. Cort. Cinnam. āā, gr. viij. Sacch. Albi, Điv.

M. ft. Pulvis divid. in partes æquales, No. viij.

S. A powder twice a day.

Tortual.

155.

R. Magnes. Carb.
Sem. Fœniculi, āā, 3ij.
Pulv. Rhei, 3j.
Ferri rament., 3ss.
Pulv. Cinnam., 9j.
Sacch. albi, 3j.

M. ft. Pulvis.

S. A scruple four times a day, to a child of two and a half years.—Hufeland.

Ferri Ammonio-Chloridum. In this preparation, which is very variable in its composition, are united the deobstruent qualities of sal-ammoniac, with the tonic ones of the iron; the strong astringent and heating effects of the latter are tempered by the presence of the former, and the ammonio-chloride thence constitutes one of the best chalybeates for the diseases of early life. As it tends to counteract abdominal congestions, it may be advantageously ordered in glandular and visceral obstructions depending on atony and relaxation, after the secretions have been previously regulated by alterative doses of mercury. It then exerts a mild tonic deobstruent agency, and is compatible with a degree of vascular excitability in which

other ferruginous preparations would prove positively detrimental. In such cases it may be joined with extract of dandelion, or with rhubarb.

The ammonio-chloride of iron is also beneficial in atonic affections of the mucous membranes, especially of the bladder, in diseases of the lymphatic vessels and glands, in scrofula and rickets; in short in every description of ailment in which it is desirable to unite a tonic and deobstruent action.

Dose and form of exhibition. The dose of this salt is 1 grain for infants, and 2 or 3 grains for older children, three or four times a day; in solution and mixtures, with aromatics and laxatives, and also with the muriates of lime or barytes. The dose of the tincture is from 5 to 20 drops.

156.

157.

R Ferri Ammonio-Chlor. gr. xxiv. Pulv. Rubiæ. Tinct., 3iij. Oleo-Sacch. Fæniculi, 3j. M. ft. pulvis. divid. in partes æquales, No. xij.

S. One thrice a day in scrofulous affection of the bones for a child between six and eight years.—Wendt. R Ferri Ammonio-Chlor.
3j.
Ext. Taraxaci, 3ij.
Solve in
Aq. Menth. pip., 3iv.
Tinct Rhei, Co., 3vj.
Syrup. Aurantii, 3iss. M.

S. To infants a teaspoonful twice a day; to children upwards of two years, a dessert-spoonful thrice a day.

TINCTURA FERRI SESQUI-CHLORIDI. The muriated tincture of iron, is commonly given for the purpose of restoring appetite. The dose is from 2—10 drops, largely diluted with water. The tincture made from the acetate of iron, being less acrimonious, is more eligible for children.

R Tinct. Ferri Sesquichlor., 9ss. Aq. Cinnam., 3iss.

Syrup. Althææ, 3ss. M. Two teaspoonfuls every hour.

V. Pommer recommends the muriate of iron as a remedy in the gastro-malacia of infants, (Heidelberger Klinische Annalen, 2 Heft.) He gives it in combination with decoction and syrup of marsh-mallows, or with gum arabic. Dr. Hergt,

(Annalen für die gesammte Medizin, Karlsruhe, 1828,) and Dr. Camerer too, assert its utility in the above disease, as likewise in the chronic diarrhœa of children.

Ferri Potassio-Tartras. The tartarized iron, is less constipating and less exciting to the vascular system than most other chalybeates, and at the same time highly efficient. It is not unpleasant to the taste, and for that reason well adapted for children. It is a valuable medicine in chronic hydrocephalus when there are debility, languor of the circulation, flabbiness of the flesh; and in various convulsive disorders, as chorea, epilepsy, and the like. It may be given in the form of bolus with aromatics in the dose of grains v.—9j.

R Ferri Potassio-tart. gr. ij.
Pulv. Aromat. Co. griss.
Sacch. albi, gr. ij.
M. ft. Pulv. Una ter quaterve indies.
Evanson and Maunsell.

Is analogous in therapeutic properties VINUM FERRI. to the preceding preparation. The common dose is from 5-20 drops, twice or thrice daily. According to Sir Benjamin Brodie, the vinum ferri acts admirably in invigorating the constitution of those labouring under the scrofulous disease of the hip-joint and spine. To a child two or three years old, he gives a drachm twice or thrice a day; to children somewhat older, 2 drachms; and to those approaching puberty, three drachms, as frequently. Its use requires to be assiduously persevered in, with occasional intermission, for a period of several months or even years in such cases. Thus it may be given for a month and then discontinued for ten days, after that for another month and again discontinued for the same interval, and so on. While under this course of treatment, the patient should have occasional purgatives, frequent exposure to the fresh air, together with complete repose of the diseased parts. Should the above doses of the medicine cause inconvenience by heating the child, or confining the bowels, they may be diminished.

160.
R Vini Ferri, 3ss.
Vini Antimon., 3j. M.
S. 20-25 drops four times a day in white wine.—Tortual.

Ferri Sesqui-Oxydum. This has been recommended for the cure of epilepsy in combination with valerian, extract of hop, or with ox-gall, aloes, and myrrh, by Dr. Copland. It possesses an advantage over iron filings inasmuch as it neither occasions disengagement of flatus, nor unpleasant nidorous eructations. The dose is from gr. v. to 9j.

161.

R Ferri Sesquioxyd., gr. v. — 9j.
Pulv. Valerianæ, 3ss.
Syrup. Zinzib. q. s. ut
fiat bolus,—Paris.

162.

R Ferri Sesquioxyd.
 Pulv. Cinnam. āā, 3ss.
 Sacch. Albi, 3vj.
 Mist. Acaciæ, q.s. ut fiant
 Trochisci, No. 30.

S. Two or three, thrice a day.—Fränkel.

163.

R Pulveris Jalapæ.
Cryst. Tartari.
Carbonatis Ferri, āā, ʒj.
Pulv. Zinzib., 3ss.
Theriacæ, q.s.
Ut fiat Electuarium.
3ss.—3j. bis terve indies.

Ss.—3j. bis terve indies.
S. In worms.—Evanson and

Maunsell.

164.

R Ferri Sesquioxyd., gr. iv. Pulv. Rhei, gr. iij. Sacch. albi, gr. x. M.

S. One to be taken morning and evening, in rickets.

Ferri Sulphas. The sulphate is one of the most astringent salts of iron. Taken internally it checks secretion and excretion, and in large doses disorders the stomach. It ought not to be had recourse to as a remedy for the diseases of children, except there be excessive atony and relaxation with languid circulation and profuse discharges. It has been principally extolled as an anthelmintic in the case of the broad tape-worm, (bothriocephalus latus); and in ascarides. It has been given with benefit in chronic hydrocephalus in union with the neutral sulphates of magnesia, soda, or potash; and also in stomachic epilepsy. As an external astringent, it has been found useful in aphthæ.

Dose and form of exhibition. The sulphate of iron may be given to children of three or four years, (it ought never to be ordered at an earlier age,) in the dose of $\frac{1}{2}$ a grain three or four times a day; to those from four to six from $\frac{1}{2}$ a grain to $\frac{1}{2}$

grain, and to those more advanced from 3 to 4 grains twice a day, in solution, powder, or electuary, alone or combined with other anthelmintics, or with laxatives.

R Ferri Sulph.
Quiniæ Sulph., āā, gr. j.
Infus. Calumbæ, ʒj.
Acid. Sulph. dil. miij.
M.

S. A mixture to be taken twice in the day.—Cheyne.

166.
R Ferri Sulph., gr. j,
Myrrhæ, gr. iiss.
Conf. Rosæ Caninæ, q.s.
ut fiat bolus.

S. One twice a day.

The Mistura Ferri Composita, which contains the protocarbonate of iron, is unquestionably one of the most efficient officinal preparations; and may be exhibited in epilepsy and other congenerous diseases when there is deficient action of the vascular system or general asthenia. The dose is from a teaspoonful to a tablespoonful three or four times a day.

FILICIS RADIX. Root of the male fern, has been long famed as a remedy against tape-worm. Peschier is of opinion that the fatty matter obtained from the male fern root by distillation with ether, is the anthelmintic principle. He affirms his having cured by its means twenty-five patients. Several other observations confirm the efficacy of this preparation. Hufeland regards the extractum filicis as an anthelmintic superior to every other in point of quickness, certainty, and mildness of action, and Ebers of Breslau concurs with him (Hufeland's Journal, 1828). More recently, Dr. Tott has shown the salutary influence of the ethereal extract, in the case of a girl of eleven labouring under tape-worm. 3 grains in two portions the same day, and on the following morning, after taking some of the compound infusion of senna, fasting, she voided a worm which happened to be the Tænia cucurbitina. (Casper's Wochenschrift, No. 34, 1833). Fränkel.

Dose and form of exhibition. The powdered root may be given in the dose from $\frac{1}{2}$ a drachm to 2 drachms in the form of electuary, repeated from time to time and aided by cathartics. The ethereal extract, according to Frankel, may be administered to children betwixt five and ten years of age to the amount of half a scruple, in the evening, the patient having taken but

little food beforehand, in one or two doses made into pills with the powdered root; or if the child be too young to swallow pills it may be mixed with syrup or honey of roses. On the following morning it must be followed by the infusion of senna or castor oil.

167.

R Extr. Filicis Æther. 9ss. Pulv. rad. Filicis, q.s. M. ft. Pil., No. x.

two doses.—Frankel.

168.

R Ext. Filicis Æther. 9ss. Mellis Rosæ, 3ss.

M. One half to be taken, and S. To be taken at night in | in half an hour the remainder. Fränkel.

FŒNICULUM. Fennel seed, has an aromatic smell and a moderately warm pungent taste, due to the presence of essential oil. The distilled water of fennel, like that of dill and anise, is frequently resorted to, whenever a gentle stimulus is needed to restore the mucous membrane of the stomach to a healthy condition. In the flatulent colic of new-born infants, Jörg directs a teaspoonful of fennel-water to be taken every two or four hours, until relief be obtained. Fennel-water is moreover employed externally as a collyrium in the early stage of infantile ophthalmia; or, as Meissner recommends, in the proportion of three parts to one of the mucilage of quince, applied tepid as a fomentation in that disease.

Dose and form of exhibition. The dose of agua Fæniculi is a teaspoonful, usually combined with antacid and soothing remedies.

GLYCYRRHIZA. Liquorice root, is employed as a demulcent in catarrhal affections; and in some gastric complaints which seem to arise from deficiency of the natural secretion, which should defend the stomach against the acrimony of the food, and the fluids secreted into it. It is a useful corrective of the taste of nauseous medicines; and of the tormina from senna. It is given in infusion or decoction, in the dose of \frac{1}{2} an ounce or an ounce frequently repeated.

GRANATUM. The rind of the Pomegranate, is a strong astringent, and as such is occasionally made use of. The bark of the root has been long medicinally employed in Persia,

as a remedy for the expulsion of the tape-worm.

Dose and form of exhibition. The powder of the bark is given in doses of from 8 grains to a scruple twice a day. The Indian decoction, according to Dr. A. T. Thomson, is made by boiling 3ij. of the bark, in a pint and a half of water, down to f.3ix., of which f.3ij. are given for a dose to an adult every half hour until the worm is expelled, which generally occurs in twelve hours after the first quantity has been administered. The decoction excites nausea, occasionally griping, vertigo, tremblings, lassitude in the thighs and legs; hence we ought cautiously to watch its action in children, and commence with doses considerably less than the above mentioned.

The resin of Guaiac, is a stimulant diapho-GUAIACUM. retic, and augments, it is said, the secretions and excretions of the kidneys and intestines. It creates a sense of warmth in the stomach, increases the heat of the body, and quickens the circulation. If the patient be kept warm in bed it promotes perspiration; if exposed freely to the air, an increased flow of urine. Dull, heavy, and phlegmatic subjects bear its exhibition best; plethora, febrile excitement, and abdominal congestion, contra-indicate its employment. Among the diseases of children, resin of guiac is chiefly administered in scrofula affecting the skin, after arterial action is subdued; and in a particular form of internal scrofulous ophthalmia, characterized by intolerance of light, dull pain in the eyeball and dry skin, with but little, if any, visible signs of inflammation. It is especially adapted to those forms of scrofula, in which there is a predominant torpor and atony, where the secements are sluggish, and an excess of viscid tenacious mucus obstructs the glandular orifices along the intestinal tube. It has been found of utility in ozæna and in epilepsy.

Guaiac may be advantageously combined with antimonials. While it is being administered, the medical attendant must pay attention to the alvine discharges; should it, in small doses produce gripes and watery evacuations, it ought imme-

diately to be discontinued.

Dose and form of exhibition. The powdered resin of guaiac may be given in the dose of 5 to 10 grains twice or thrice daily, in combination with James's powder, calomel, ferruginous preparations, rhubarb, alkaline carbonates; in the form of bolus, or else diffused in water by means of one-half its weight of gum arabic.

R Cretæ, 3ss.
Pulv. Resinæ Guaiaci.
Ferri rament. āā, 3ss.
Sacch. albi, 3iij.
M. ft. Pulvis.

S. Ten grains twice a day.

-Gölis.

170.

R Calomelanos. Antim. Oxysulph., āā, gr.j. Pulv. Resinæ Guaiaci, gr.x.

Extr. Conii, gr. ij. Pulv. Glycyrrhizæ, 9ss.

M. ft. pulvis. dent. tal. dos. No. xii.

S. One twice a day for a child of eight or ten years old.

—Vogt.

HÆMATOXYLUM. Logwood, is an excellent astringent, and from its sweetish taste well adapted as a medicine for children. Its use is indicated in bowel complaints, when the stools are thin, watery, pale-coloured, or white and frothy like yeast, and the abdomen flabby and collapsed; in infantile cholera; and in convalescence from dysentery.

Dose and form of exhibition. The dose of the decoction is from half an ounce to an ounce taken frequently.

HORDEUM. Barley consists almost entirely of amylaceous matter, and, when boiled, forms an excellent article of nourish ment. The simple decoction, properly acidulated, is one of the best beverages in febrile and inflammatory diseases. Sweetened with honey and sharpened with vinegar, it forms a useful detergent wash for the fauces in scarlatina anginosa.

HYDRARGYRUM. Mercury exerts its medicinal agency through the medium of the circulation. It promotes the biliary and other secretions of the chylopoietic viscera, the secennent functions of the lymphatic system and skin. When absorbed it has the power of exciting a new action in the system, differing not merely in degree, but in kind, from other morbid and healthy actions.

In virtue of its specific stimulation of the glandular and follicular system, it becomes a sorbefacient remedy. By the new action which it establishes in the secretory apparatus, it proves a valuable revulsive. Hence, in cases of long sustained febrile irritation, as Dr. Dunglison remarks, as also in those of an inflammatory character where they have become chronic.

mercury breaks in upon the morbid condition more effectually than any other agent. But it is chiefly in the view of promoting the excretory functions, and thereby giving activity to the powers of assimilation, that mercurials are administered in the

diseases of early life.

During infancy, while the different textures and organs are in the course of development, and the manifestations of life are chiefly vegetative, there is a constant susceptibility to disease in the membranous and dermoid tissues. From the activity of the circulatory functions, such diseases, when kindled up, are distinguished by local inflammatory action, with a marked dispositon to termination in the effusion of fluids, or in the formative process, that is, exudation of coagulable lymph. Now, it is precisely under such circumstances, that certain mercurial preparations may be resorted to, as valuable auxiliaries in removing the particular state of vessels which constitutes the morbid condition; or, as the means of counteracting structural changes, the further effusion of lymph being checked and that already effused being taken up by the absorbents and thrown out of the system. "Mercury," observed the late Dr. Clarke, "appears to be the only medicine which has been successful in the cure of acute hydrocephalus, and with this view it may be used both externally and internally in very considerable quantities." (Commentaries, Part I.)

Mercurial ptyalism has been seldom or ever witnessed in a child under three years of age. Having, therefore, at that period no criterion afforded through the medium of the salivary glands of the extent to which the system is affected, the administration of mercury ought to be carefully watched in irritable nervous temperaments, and in subjects of a scrofulous diathesis; otherwise, it may give rise to dangerous

excitement and fatal erethism.

It is certainly not unimportant to bear the following fact in mind, in the exhibition of this remedy in infantile diseases. "The immoderate use of mercury in early infancy, produces, more perhaps than any similar cause, that universal tendency to decay, which in many instances destroys almost every tooth at an early age." (Bell on the Teeth, p. 129.)

The preparations of mercury are indicated in inflammations of membranous tissues, after previous depletion, especially when there exists a tendency to exudation of coagulable lymph or serum, as in meningitis, pleuritis, pericarditis, and peritonitis; in inflammations of the lining membrane, of the air-

passages, more particularly croup; in inflammations of the iris; in inflammations of the synovial membranes; they are moreover indicated in hydropic accumulations, when the effused fluid is the result of inflammation, as in hydrocephalus arising from meningitis, or in hydrothorax from pleuritis; in congestive states of the liver and intestinal mucous membrane; in glandular disease of the mesentery; and in syphilis, whether congenital or acquired.

Their employment is contra-indicated, by the presence of a scorbutic taint, with disposition to hæmorrhagy; or by that of

morbid irritability of the stomach or bowels.

HYDRARGYRUM CUM CRETA. Mercury with chalk, is an extremely mild preparation. It is laxative and antacid; and peculiarly suited to the bowels of children when acidity is

present, with or without diarrhœa.

Mercury with chalk has been given with advantage in acute hydrocephalus in infants; andwhere the bowels have been griped, or are irritable, combined with Dover's powder. In relieving morbid sensibility of the brain or irritability consequent upon that form of inflammation of the arachnoid, described and designated by Dr. Nicholl, "sensitive erethism of the brain," the same combination has answered.

In the more chronic forms of convulsions, when the origin of the disease is obscure, and the leading functions of the system are not obviously disturbed, great advantage has been derived, in numerous cases, from a steady use of the following treatment. A powder consisting of mercury with chalk, rhubarb, and carbonate of soda is to be given every evening, and during the day small doses of the solution of potash and ipecacuanha wine in any distilled aromatic water. Blisters behind the ear and antimonial friction, with purgative enemata every second or third day, are important auxiliaries. (Med. Chir. Rev., 1836.)

Mercury with chalk is indicated in struma, when an imperfect biliary secretion and a torpid state of the bowels are prominent symptoms. It relieves abdominal plethora, and thus removes pulmonic congestion. It ought to be given in such doses and at such intervals as shall prevent its producing irritation of the mucous surfaces of the bowels, and followed by some gentle, laxative, as suggested by Sir James Clark. (Op.

cit.)

In slight diarrhea, with fluid feculent motions, a grain or

two of mercury with chalk, given at night, the tepid bath and occasional doses of rhubarb with magnesia, are all that is required. In diarrhœa, with relaxation, an attempt should be made to restore the natural functions, when the stools are very foul and unnatural in their appearance, by three or four grains of it, or a grain of blue pill bruised down in any liquid vehicle with four or five grains of carbonate of magnesia. Mercury with chalk sometimes proves injurious in diarrhœa, acting as an irritant, even when guarded by an opiate.

A few grains of mercury with chalk and one of jalap, or with two or three of rhubarb, answer well in removing

infantile jaundice.

It is a valuable remedy in the syphilis of infants, in the dose of 2 or 3 grains, once or twice a day. As a sorbefacient it is

recommended in chronic hydrocephalus.

In febrile disorders, when the secretions are faulty, the mercury with chalk, or blue pill suspended in a mucilaginous liquid, is indicated, as a mild alterative and aperient.

171.

R Hyd. c. Creta, gr. xij.
Sodæ Carb. exsicc., 3ss.
Camphoræ rasæ, gr. iij.
Pulv. Ipecac.
Pulv. Opii, āā, gr. j.
Pulv. Cinnamom., gr.
xviij.
Sacch. albi, 3j.
Olei Anisi, miv.
Tere probe simul et divi

Tere probe simul et divid. in chartulas xij. quarum o. u. vel m. n. capiatur una.—Copland.

172.

R Cretæ, ppt., $\overline{3}$ ss.
Saponis Amygd.
Pulv. Rhei, āā, 3j.
Hydr. c. Cretâ. 9j.
Ol. Fæniculi, mviij.
Sacch. albi, 3ij.
Tere bene simul.

Dose: from 6 grains to half a drachm twice or thrice a day in infantile diarrheea.—Copland.

73.

R Hydrarg. c. Cretâ, 3j. Pulv. Ipec. Co., 9ij. Magnes. Carb., 3ss. Tere bene simul.

Dose. 4 to 6 grains, as a sedative for infants.—Copland.

174.

R Hyd. c. Creta, 3ij. *
Sodæ Carb. Exsicc., 3iv.
M. bene.

Dose. 6 to 12 grains for an infant.—Copland.

R Pil. Hydrarg., gr. ij.
Tere simul cum.
Mist. Acaciæ, 3ij.
Adde.
Mist. Cretæ, 3iss.
Aq. Cinnam., 3x.
Confect. Arom., 9j.
Sit mistura cujus cochleare medium post sin-

gulas sedes liquid. su-

S. In infantile diarrhæa.

mend.

176.

R Hyd. c. Cretâ, 9ss.
Pulv. Cretæ, Co., 9j.
Pulv. Tragacanth. Co.
3ss. M.

Divide in partes x. æquales. Sumat. una 4à quâque horâ.

S. In diarrhæa, for an infant of four or six months.

Hydrargyri Bichloridum. Bichloride of mercury or corrosive sublimate, although a virulent poison, has been administered with benefit as an alterative and sorbefacient in certain infantile diseases. In chronic laryngitis, in mesenteric affections, and other lingering inflammations of a subacute kind, where lymph has been thrown out and consequent thickening and adhesion of membranes taken place, the internal exhibition of corrosive sublimate, in combination with antimonials and opium, imparts, it is said, a new and healthy action to the whole secerning system.

It has likewise been given in hydrocephalus. It is said to produce olive-green coloured stools, and increase the flow of

urine. (Underwood and Copland, Op. cit.)

Feiler recommended it in the treatment of induration of the cellular tissue. Jäger and Carminati, however, derived no

benefit from the practice.

The dose is from ½th to ½th of a grain twice, thrice, or even oftener in the day; of the liquor hydrarg. bichloridi, 3ss. may be given. Feiler ordered a drop of a solution, holding 1 grain in 2 ounces of water, to be taken every hour, in any suitable vehicle. Sir Astley Cooper gives it, in the case of enlarged mesenteric glands, in union with tincture of bark, or tincture of rhubarb if the bowels be confined. In the case of an overdose having been swallowed, albumen or the white of egg the appropriate antidote.

Externally, corrosive sublimate has been used in the form of lotion. Wedekind (Hufeland's Journal, Bd. 55) extols his

solution (about 2 grains to the ounce of water, and even further diluted, according to circumstances,) as an excellent remedy in crusta lactea. He directs the affected parts to be touched with this solution, whereby the disease generally yields in four weeks' time, without injuring the child's health. At first he conjoined its use with internal remedies, muriate of barytes, sulphur, &c.; but subsequent experience convinced him that those were superfluous, as the external treatment sufficed. In porrigo he found the sublimate solution most effective after the hair was removed and the crusts softened with any unguent. Duncan recommended an ointment for the same purpose, consisting of a scruple of sublimate to an ounce of lard. It has been applied in the syphilis of children as a fomentation, in the proportion of a grain to 4 ounces of water mixed with crum of bread. The common vellow wash is prepared by adding 1 grain to 2 ounces of lime-Trousseau has found a solution injected tepid into the nostrils effective in ozæna, alternated with the insufflation of a powder made of 24 grains of ammonio-chloride, 12 grains of peroxide of mercury, and half an ounce of pulverized sugar-As a collyrium, a grain of sublimate dissolved in 8 ounces of pure water, employed cold for half an hour morning and evening, is well adapted for strumous ophthalmia. nævus. I have seen Gräfe use the sublimate as an efficient escharotic, according to a subjoined formula (177). A small caustic issue may be formed by inserting a minute quantity, reduced to impalpaple powder, into a fine incision made with the edge of a lancet, in the skin. Kopp proposes it as an enema against ascarides for children six or seven years of age.

However employed, great caution must be exercised, as poisonous and fatal effects have been known to result from

even its outward use.

177.

R Hydrarg. Bichloridi, 3j. Mucilag. Acaciæ, 3ij. Aq. destill. q. s. ut fiat pasta.

S. Escharotic paste.—Gräfe.

178.

R Hydrarg. Bichloridi, gr.j. Aq. destillat., Zvj. Vini Opii, 9ss. M.

S. Collyrium for the second stage of the blennorrhæal oph-thalmia of new-born infants.
—Schön.

R Infus. sem. Santon. (ex. 3ij.) Ziss. Hydrarg. bich., gr. 1-14.

Mist. Acaciæ, 3ij. M.

S. To be administered tepid as an enema. - Kopp.

180.

R Hydrarg. bichlor., gr. j. Solve in q. s. aq. destill. Mist. Acaciæ, 3j.

Terentur invicem donec evanuerit omnis tenaci-

S. Apply a little with a hair-pencil in scrofulous blepharitis and ulcers of the cornea .- Jüngken.

HYDRARGYRI CHLORIDUM. Protochloride of mercury or calomel, is one of its most efficient medicinal preparations. There are few remedies more valuable, none whose indiscriminate use has led to more pernicious results. in minute and repeated doses, as for instance every other day, calomel acts as an alterative of morbid condition; but in large doses as an evacuant and revulsive. It is singularly eligible as a medicine for children, from its tastelessness and small bulk.

There is scarcely a disease of childhood for which calomel has not been recommended. Its use is, however, more particularly

indicated in the following:

In internal phlegmasiæ, as acute hydrocephalus, croup, pneumonic, hepatic, and enteric inflammation. Here, after due abstraction of blood there is no remedy more appropriate than calomel for subduing what is called increased vascular action, counteracting lymphatic exudations, depositions, adhesions, and concretions, and thus annihilating both the disease and its immediate sequelæ.

In exhibiting the remedy in the above named and other inflammatory ailments the following circumstances

attention.

1. Depletion ought in every instance to precede its use, in order to diminish, with promptitude and certainty, intense vascular action. According to Frankel, however, in the case of pale, drooping, scrofulous children, where the symptoms are mild and the disease still in its stage of premonition, we may at once proceed with calomel alone.

2. The action of the remedy must be chiefly directed to the intestinal canal and biliary organs, in order to procure the discharge of morbid secretions and fecal collections. children under one or two years of age, neither salivation, as formerly noticed, nor much intestinal disorder, will be produced by it, unless the alimentary canal be in an irritable condition. Hence, in hydrocephalus, as Dr. Copland states, a large dose of calomel, either alone or with James's powder, ought to be immediately exhibited, and after three hours repeated, with the addition of toasted jalap or scammony, and its operation promoted by a terebinthinate enema. In children above three or four years of age, its specific action may be obtained, but with little certainty, even though given in small doses combined with opium or Dover's powder. Where no essential benefit has accrued and the bowels have been freely purged, then it may be given with digitalis, and narcotics, as opium or henbane, in order to guard against effusion, by diverting the morbid determination of fluids from the head and changing the action of the extreme vessels, and to alleviate pain and sickness. (Dictionary of Medicine.)

The dose of calomel to be given, in a disease so fraught with imminent danger as acute hydrocephalus, does not depend so much on the age as on the urgency of the circumstances, and its operation on the intestinal canal. Hence even to infants it must be administered in quantities rapidly succeeding each other. Gölis gives to infants, from one to four months old, 4th of a grain, to those, from six months up to one or two years, 1 a grain; Wendt gives as a medium dose 2 or 3 grains: the late Dr. Clarke prescribed calomel to children of a year old and upwards, in the dose of 1 grain, every six, four, or three hours, unless diarrhœa should ensue. However, no general rule can be made which shall apply to all cases. If the peril be great we may, on the authenticity of experienced, as well as cautious practitioners, order to the youngest infant 1 grain, and to children somewhat older, 2, 3, or 5 grains every hour or two. To exhibit larger quantities is futile if not dangerous; the above will answer every purpose which is to be looked for.

As calomel is at all times liable to create intestinal irritation, and its continued use certain to cause it, whenever griping and frequent green mucous stools supervene, it ought to be intermitted, or the frequency of the dose lessened, until the pain and diarrhoea have subsided. Neglect of such precaution has

led to the worst consequences; the relief to the head or larynx having been procured at the expense of mortal inflammation of the bowels. According to Gölis, six or eight tolerably consistent green evacuations, resembling capers, are a favorable indication.

Immediately after depletion and emetics, the best internal medicine, says Dr. Copland, in the early stage of inflammatory croup, is calomel and James's powder, from 3 to 5 grains of the former, with two or three of the latter. This powder may be repeated every second, third, or fourth hour, until two or three doses have been taken. It ought to be conjoined with tepid bathing and followed by some laxative. The same practice may be pursued in the second, or developed, stage of the same disease. Calomel may also be combined with opium or Dover's powder; and, if given subsequently, in croup, with purgatives, expectorants, antispasmodics, &c. Gölis conceives it to be useful in diminishing the tenacity of the croupal exudation, and in retarding its formation. He, moreover, supposes that the daily exhibition of a small dose of this medicine subdues the diathesis or constitutional disposition to contract the disease; and when croup has been prevalent and appeared in one of a family, he has given about a grain every night to each of the other children. It may likewise be combined with the oxysulphuret of antimony, to promote the removal of accumulated mucus and albuminous concretions.

Calomel may be suitably joined with magnesia when acidity predominates in the first passages; with musk when spasm is present. During its administration such saline substances as may effect its chemical decomposition should be avoided. It ought to be given with some pulverulent or viscid excipient, as the powder of liquorice, starch, magnesia, gum arabic, or gum tragacanth. Sachse recommends a syrup containing senega and ammoniacum, as its appropriate vehicle in croup. He also advises where a child has eaten freely in the beginning of the disease, to evacuate the contents of the stomach directly after the bloodletting, by means of an emetic, as above pointed out, otherwise the calomel is apt to occasion inefficient watery motions.

Should ptyalism be excited, a thing of rare occurrence, and allowed to continue for some time, there is a risk of sloughing of the gums, nay exfoliation of the maxillæ and death, to be apprehended. These are best guarded against by bringing the

child into a pure air, exhibiting saline aperients, and leeching the affected parts; at the same time supporting its strength, and giving anodynes if necessary. During the heat of summer, greater caution is required, since high temperature is said to favour salivation. (Eymann, in Hufeland's Journal, Bd. 15.)

Calomel is further employed: in all morbid affections characterized by vascular excitement and determination of blood to important organs, as occur in dentition and in convulsions. During dentition, when the alvine discharges are of a very bad quality, being fetid, blackish, or very pale, an occasional dose of calomel, to modify the intestinal secretions, should be exhibited. (Joy, in Cyclopædia of Practical Medicine.) In convulsions, symptomatic of derangement of the bowels, calomel serves to remove the intestinal irritation, so common in young children, from the quick accumulation of acrid mucus, and to restore the secretion of bile when it is scanty, and any torpidity of the liver which may produce unhealthy bile. It may be combined with oxide of zinc, extract of conium, or hyoscyamus, and followed by some purgative. It is judiciously observed in the Medico-Chirurgical Review for 1836, that "a dose or two of calomel with carbonate of soda, followed by the free use of the infusion of senna, combined with manna and tartrate of soda, and by the exhibition of a senna enema, (never to be neglected) will very generally afford quick and decided relief in convulsions proceeding from irritation of the bowels or kidneys."

When again the dental irritation solicits such an increased flow of blood to the head as to endanger the sensorium, calomel, in virtue of its revellent and antiphlogistic properties, equalizes the circulation and thereby prevents cerebral mischief.

In infantile paraplegia, preceded by convulsions and followed by coma, and which, according to Mr. North, proceeds from derangement of the digestive organs, the stools being costive and dark coloured, calomel and jalap as a purge, aided by cutaneous frictions and the warm bath, will commonly effect a cure.

In sympathetic incontinence of urine, which in children usually depends upon a disordered state of the large intestines, nothing is more effectual than calomel and rhubarb, with senna on the alternate nights. (Wardrop.)

Underwood states, that tertian ague (the type under which ague commonly occurs in children,) is to be cured by purga-

tion with calomel and scammony, or calomel and rhubarb, given on the days between the fits, and small doses of James's powder on the return of the fever.

In infantile erysipelas, Dr. Copland recommends calomel, or mercury with chalk along with magnesia or subcarbonate of

soda.

In induration of the cellular tissue, supposed to depend on syphilitic taint, Gölis recommends calomel. He orders it to be given, twice daily, in the dose of $\frac{1}{8}$ th, $\frac{1}{6}$ th, or $\frac{1}{4}$ th of a grain. In diffuse intertrigo he enjoins, on similar grounds, the same practice. Henke and Steinberger (Zeitschrift von Busch, 1834) likewise concur as to the utility of calomel, together with mercurial inunction on the affected parts, in cases of scleroma. In the Berlin Charité Hospital, says Fränkel, to children labouring under that morbid condition, from a $\frac{1}{4}$ to $\frac{1}{2}$ a grain of calomel was given twice a day, with the daily use of aromatic baths and frictions made with 1 or 2 drachms of mercurial ointments upon the indurated spots. Out of ten children thus treated, two only died.

The German physicians administer calomel in infantile syphilis. The dose for an infant is a 4th of a grain twice or thrice in the day, mixed with starch, in order, they say, to prevent its operating by stool. In fever, when the stools are dark and unusually fetid, calomel may be advantageously given

alone or with the compound powder of scammony.

Dr. Merriman treated, successfully, a case of severe aphonia by the daily use of calomel with jalap. It procured 2 or 3 motions daily and was continued for about three weeks.

(Notes to Underwood.)

In the treatment of infantile or remittent fever, it is of great importance to keep up a regular daily but not profuse purgation, by the use of calomel and other aperients with such adjuvants as saline mixture, nitre, and antimonials. "Calomel," says Sir James Clark, "when given in doses suited to the patient's age and to the state of the digestive organs, repeated only at considerable intervals, and followed by mild aperients, forms a valuable remedy in many cases of tuberculous cachexia, more especially in torpid constitutions." (Op. cit.) Brandis also remarks that, "in children labouring under hectic, (quere, tuberculous cachexia?) sluggish accumulations in the intestinal canal contribute more to keep up the febrile commotion than

the original disease; and regards repeated small evacuations from calomel and jalap, as a specific cure." (Nosologie und

Therapie der Cachexien, 1834.)

In diarrhœa when the abdomen is full, hard, and irregular in its shape, calomel will certainly be required, notwithstanding the frequent evacuation of fecal matter. The most effectual combination in such cases is a grain or two of calomel united with jalap, or scammony, or rhubarb, or given by itself, and followed in an hour or two by a dose of castor oil or solution of salts in almond emulsion. It may be alternated with cretaceous mixture, or a solution of supercarbonated soda or potash in mucilage.

If the evacuations be hard, lumpy, scybalous, or pasty, or of a green, or leaden, or blackish colour, the same plan is required; and the aperient must be continued daily, or as often as may be found necessary, till the evacuations become of a

better consistence and colour. (Notes to Underwood.)

Calomel is frequently prescribed in scrofulous ailments from its influence over the glandular and lymphatic system. But the utmost circumspection on the part of the medical attendant in its administration in strumous habits is requisite. It should be alternated with purgatives and laid aside, so soon as the object for which it is given is attained. For it is well ascertained that the constitution may be undermined by the misuse of calomel in children. As a remedy in scrofula it may be combined with oxysulphuret of antimony, conium, or guaiacum. The Plummer's pill affords a combination well calculated to promote the secretions.

Calomel has the character of quickening the action of other remedies and so ensuring their effects: and hence is combined with squills to produce diuresis in dropsy, with antimonials to produce diaphoresis, and with various cathartics to promote the

alvine discharge and to expel worms.

To act on the bowels, calomel may be given alone in the dose of from $\frac{1}{4}$ th to 1 or 2 grains at most, and usually requires to be followed, in two or three hours, by a dose of castor oil or

other aperients.

Except where there are distinct signs of a congestive state of the hepatic system, or where the alimentary canal is loaded with viscid acrid mucus it ought rarely to be given as a mere aperient to infants. To resort to it on all occasions is a grave

error. Since it is always, as stated above, liable to create intestinal irritation. And although infants bear larger doses than adults, it is, nevertheless, a physiological truth that the sudden introduction of large quantities of any unassimilable substances into the blood, deteriorates this fluid, and thereby lowers the intensity of life.

Calomel is externally employed in the form of ointment, in the proportion of a drachm to an ounce of lard; in porrigo

favosa, impetigo, herpes, psoriasis, and lepra.

181.

R Calomelanos. Sacch. albi, āā, 3j. Pulv. digitalis, 3ss. M.

Dose, 1 to 5 grains.—Copland.

183.

R. Calomelanos, gr. j.—ij. Pulv. Ipecac., gr. iss. Confect. Arom. q. s. ut fiat bolus.

S. One every three hours, in croup.

185.

R Calomelanos, gr. viij.-xvj. Magnes. Carb., Əij. Pulv. Acaciæ, Əij.

M. ft. pulv. divid. in viij. partes æquales.

S. One every two hours in croup.—Fränkel.

182.

R Calomelanos, gr. j.
Pulv. Digitalis, gr. ss.
Pulv. tragacanth. Co.,
gr. vj.
M. Sit pulvis.

S. One every sixth hour, in hydrocephalus, for a child two or three years old.

- 184.

R Calomelanos, gr. xij. Pulv. Jalap. tostæ.

Pulv. Glycyrr. āā, 3j.

M. ft. pulvis divid. in xij. partes æquales.

S. A powder every second hour. - Fränkel.

186.

R Calomelanos, gr. iij. Amyli, 3ss.

Sacch. albi, 3iss.

M. ft. pulv. divid. in xij. partes æquales.

S. One thrice a day in infantile syphilis.—Wendt.

R Calomelanos, gr. ss.
Antimon. Oxysulph.
Extr. Hyoscyami, āā, gr.

1/4.
Pulv. Glycyrrhizæ, gr. x.
M. ft. pulvis.

S. One four times a day to a child about two years old, in inflammation of the chest. Fränkel.

r rankor.

188.

R Calomelanos, gr. viij--xvj. Pulv. digitalis, gr. ij.—iv. Pulv. Acaciæ, Эij. M. ft. pulv. divid. in viij.

partes æquales.

S. One every second hour in the inflammatory anasarca after scarlatina.—Wendt.

189.

R Calomelanos, 3j.—3ij. Ung. Sambuci, 3j. M. Sit Unguentum.

S. A little of this salve, spread on each side of a doubled linen cloth, to be applied twice a day, in ulceration behind the ears.—Underwood.

190.

R Calomelanos, 3j. Opii, 9j. Axungiæ porc. 3j. M. Sit Unguentum.

S. A little of this ointment to be rubbed gently every hour or two, over the front of the neck, in croup.—Krüger. Hansen.

Hydrargyri Ammonia-Chloridum. This preparation, commonly known as the white precipitate of mercury, is only employed externally. Rayer has found an ointment, containing a drachm mixed with an ounce of lard, very efficacious, applied in friction to the affected parts, in two forms of scaly disease of the skin, lepra and psoriasis. Inunctions, with a similar ointment, are recommended by Lentin in croup; by Kopp as a substitute for the tartar-emetic salve, to produce pustules on the skin; as a dressing to the excoriated surfaces in crusta lactea; and as an application in chronic ophthalmia tarsi, a small quantity being put on the everted eyelids, by means of a hair pencil, in the proportion of ij.—iv. grains to 3j.—3ij. of fresh lard or butter, gradually increased to 8 or 10 grains.

R Hydrarg. Ammon. chlor. Camphoræ, āā, 3j. Cerati Cetacei. 3vj. M.

S. A bit, the size of a nutmeg, to be rubbed on the neck, every half-hour, in croup.— Hecker.

193.

R Cerati plumbi, 3iij. Hydrarg. Amm.-Chlor., 3ss.

M. ft. Unguentum.

S. To be applied in chronic eczema.

192.

R Ung. Oxydi. Zinci, Zj. Hydrarg Ammon. Chlor., Dj.

M. ft. Unguentum.

S. To be applied to the sores produced in crusta lactea.—Wendt.

194.

R Hydrarg. Amm.-Chlor. gr. ij.-iv.

Öxyd. Zinci, gr. vj.—viij. Extr. Krameriæ, gr. x.—

xij.

Butyri insuls., 3j.—3ij. M. ft. Unguentum.

S. To touch the eyelids with several times in the day.— Ritterich.

HYDRARGYRI OXYDUM. Oxide of mercury, is occasionally used in the treatment of infantile syphilis, scrofulous ophthalmiæ, and cutaneous eruptions. Schenk recommends it in croup, as being less liable to purge than calomel. He orders $\frac{1}{2}$ a grain every two hours, 10 or 20 drops of antimonial wine as frequently, until vomiting be produced; and frictions, with camphorated mercurial ointment upon the throat. (Hufeland's Journal, Bd. 62.)

Dose and form of exhibition. Internally it is given to the amount of $\frac{1}{8} - \frac{1}{6} - \frac{1}{2}$ a grain, twice or oftener in the day in the form of powder, by continental practitioners.

Externally it is used as a lotion; in which form it may be obtained extemporaneously, by adding about 7 grains of

calomel to an ounce of lime-water.

R Hydrarg. Oxydi, gr. j.—
ij.

Magnesiæ carb. Sacchari, āā, 9j.

M. ft. pulvis divid. in viij. partes æquales.

S. One three or four times a day, in strumous ophthalmia, and in strumous eruptions.—
Fränkel.

196.

R Hydrarg. Oxydi, gr.iij. Sacchari albi, 3ij.

M. ft. pulv. divid. in xij partes æquales.

S. A powder thrice a day, in syphilis of new-born infants.
Wendt.

197.
R Hydrarg. Oxydi, 9ss.
Sev. Ovil., 3ij.
Ol. Oliv., 3vj.
Ope caloris lenis contere.
S. A mild mercurial liniment in erysipelas.

HYDRARGYRI BINOXYDUM. Peroxide of mercury, commonly known by the name of red precipitate, is externally used in the form of ointment, in the advanced stages of the blennorrhœal ophthalmia of new-born children; in scrofulous ophthalmia; in chronic inflammations and ulceration of the Meibomian follicles. Gölis recommends it in tinea capitis.

198.

R Hydrarg. binox. in pulv. tenuiss. triti, gr. v.—x. —xx.

Butyr. rec. insuls., 3j.

Tere bene simul ut fiat
unguentum.

S. A bit, the size of a pea, to be introduced within the eyelids, morning and evening.

199.

R. Hydrarg. binox., gr. xv. Butyr. rec. insuls., 3ss. M.

S. To be applied to the crusts in tinea.—Gölis.

R. Hydrarg. binox , 9ss. Cerati, 3iij. Plumbi acet. Vini Opii, āā, 3ss. M. Signetur ut supra (198.)

Bonorden.

201

R Cerati, 3ij.

Hydrarg. binox. gr. v.—x.

Vini Opii, gtt. v.—x.

M. ft. Unguentum.

S. Apply with the finger to the eyelids in the blepharoph-

thalmia of infants newly born.

Dzondi.

Hydrargyri Biniodidum. M. Biett, of Paris, recommends in herpes exedens, as also in syphilitic and scrofulous ulcerations, the application of an ointment made with from 10 to 20 grains of the biniodide of mercury to an ounce of axunge. Its application causes a powerful local irritation; sometimes an erysipelatous tumefaction of the adjunct parts, which is not, however, of long duration. From its erosive nature, a new action is induced in the vessels of the part, whence a salutary change is visible in the appearance of the sore on the separation of the eschar, and cicatrization soon follows. Its modus operandi closely resembles that of corrosive sublimate.

Hydrargyri Sulphuretum cum Sulphure. This rather inert preparation of mercury has been given in glandular and chronic cutaneous affections. The German physicians use extensively in scrofulous diseases a compound of this with the sulphuret of antimony, under the name of athiops antimonialis, which is frequently combined with conium, digitalis, guaiacum, rhubarb; and, in the case of infants, with absorbent and laxative medicines.

Dose and form of exhibition. The mercurial sulphuret may be given to infants in the dose of half a grain or a grain twice a day; to children a grain for each year of their age twice or thrice daily.

202.

R Hydrarg. sulph. c. sulph. gr. ss.—v.
Magnesiæ, gr. iv.

Sacchar. albi, 9ss.

I. ft pulv. dent. tal. dos.

M. ft pulv. dent. tal. dos. No. xij.

S. One twice a day,-Fränkel.

203.

R Hydr. sulph. c. sulph. 3ss.—3ij.

Cretæ, pptæ, 3j. Oleo-Sacch. Fænic., 3ij.

M. Dose, 10 grains thrice a day, in scrofula.—Berends.

INFUSUM SENNÆ COMPOSITUM. This is a sure and safe aperient for children. Dr. Paris recommends that the infusion be conducted in a covered vessel, and only such a quantity made as may be required for immediate use. notwithstanding every precaution, the extractive of the plant will to a certain extent become oxidized, and the infusion have a tendency to gripe. Neutral tartrate of potash, and alkaline salts, are its most useful adjuncts, being best fitted for increasing the solubility of its oxidized extractive, or the purgative activity of the infusion. Sydenham's favourite "potio cathartica lenitiva" consisted of an infusion of tamarinds, senna-leaves, and rhubarb, with the addition of manna and The addition of tamarinds renders the syrup of roses. infusion more grateful, but less active. Bitters, and the decoction of guaiacum, considerably exalt its efficacy. Liquorice, as formerly observed, is said to counteract the griping effect. The infusion of senna may be advantageously conjoined with deobstruent and diuretic remedies.

Dose and form of exhibition. To infants it may be given in the dose of a teaspoonful diluted with some aromatic water, as that of pimenta, or mixed with syrup; to older children in that of a tablespoonful, every hour or two, until it produce the desired effect. The taste is best covered by syrup of orange-peel. From 4 to 6 ounces of the infusion, with 10 or 20 grains of jalap, forms an excellent combination for a purgative enema.

204.

R Infus Sennæ, Co., 3vj. Magnesiæ Sulph., 3j. Syrup. Tolut., 3j. Sp. Lavand. Co., ηγ.

S. A draught for a child, three or four years old.

205.

R Infus. Sennæ Co., 3vj. Potass. tart. Tinct. Jalap., āā, 3j. Mannæ, 3iss. M. S. Ut supra (204.)

R Infus. Sennæ Co., Zij. Vini Ipec., Zj. Potass. tart., Ziss. Ext. Taraxaci, Zij.

S. A tablespoonful every morning for a child of two or three years, labouring under abdominal congestion.

208.

R Infus. Sennæ Co., 3iij. Sodæ tart., 3vj. Ext. Glycyrrhiz., 3j. Syrup. Zinzib., 3iij.

S. To infants a teaspoonful, to children of three or four years old a tablespoonful, every second hour. 207.

R Infus. Sennæ Co., 3v.
Potass. tart., 3iv.
Syrup. Rosæ, 3ss. M.

S. A tablespoonful every second hour.

209.

R Infus. Sennæ Co. Aq. Pimentæ, āā, ʒj. Potassæ tartratis, 3ij. Tinct. Aurantii, 3j. M.

S. 1 to 2 drachms every third hour.—Evanson and Maunsell.

INULA. The root of *inula helenium* or elecampane, is reputed to be a gently stimulating medicine, resembling angelica in its action. The German writers on the materia medica believe that it influences the mucous membranes, and the lymphatic and glandular systems; and augments the force of assimilation and nutrition. Hence they direct it to be administered in pituitous conditions of the bronchi, stomach, and intestines; in acute diseases of the skin, when the eruption is backward, and where hydropic affections are likely to supervene, or already present. In the last instance, the elecampane is joined with diuretic medicines.

Dose and form of exhibition. Of an infusion or decoction made with 1 or 2 drachms to 4 or 6 ounces of water, a dessert or tablespoonful may be given every two or three hours to a child.

210.

Inf. 1. a. Aquæ fervid., zvj. in colatur. Solve. Ammoniæ Hydrochl., zj. Syrup. papaver., zss. M.

S. A tablespoonful every second hour.—Richter.

211.

R Radicis Inulæ, 3j.

Inf. in Aq. fervid. per ½ hor. Colatur, Ziv. adde.

Potassæ carb.

Acet. Scillæ, āā, 3s.

Syrup. Aurant., 3s. M. S. A tablespoonful every

two hours in dropsy subsequent to scarlatina.—Wendt.

agent by Dr. Coindet, of Geneva, in the year 1819. It exerts a special action on the absorbent or lymphatic system; and also influences the *secernents*, or those vessels whose function it is to deposit or re-produce. Like many other remedies it acts differently according to the quantity taken. In minute doses, it produces a decided *tonic* effect. It has no direct emmenagogue powers, as has been alleged, but seems to act indirectly upon the uterus, by imparting tone and vigour to the whole system. According to Brera, "it powerfully excites the nervous system, accelerates the action of the heart and arteries, and restores the functions of the sanguiferous and organic systems. It thus produces appetite, fattens the lean, and emaciates the corpulent."

The action of iodine on the animal economy has been said to resemble that of mercury. They both promote the excretory functions, and it is thus, most probably, that they increase the activity of the assimilative functions. By stimulating the secreting functions of the liver and kidneys, and promoting the insensible perspiration, iodine diminishes, as Sir J. Clark states, abdominal plethora. Hence its beneficial effects in strumous

constitutions.

As iodine is administered to children as a remedy in scrofulous affections only, it will be proper to point attention to its effects in such instances. "Under its influence, when it is judiciously employed, the patient recovers flesh, strength, and colour; hitherto pale, relaxed, and feeble, he becomes full, strong, and florid; glandular swellings disappear, or are greatly reduced, scrofulous ulcers heal, swellings of the joints are reduced, and the limbs restored to their natural proportions; and the condition of the whole animal economy is greatly improved." (Baudelocque, cited in Clark on Consumption.)

The most constant symptoms which follow the internal use of iodine, are, in the order of frequency, increased flow of urine, increased appetite, increased alvine excretion, increased discharge of saliva. During its exhibition, the state of the stomach and bowels is to be carefully studied. In the majority of cases it augments the appetite, as already mentioned, but in one patient out of six it has an opposite effect; it is then prudent to suspend its use for eight or ten days. Sometimes it determines a sense of weight and uneasiness referred to the

stomach, which is said to be obviated by exhibiting along with it a vinous tincture of cinchona.

In reference to its action on the bowels, it was found in one-third of Lugol's patients to produce, daily, from five to seven motions, often accompanied with colic. However salutary these repeated evacuations may have proved in many cases, their occurrence demands additional foresight on augmenting the dose, or even intermission of the medicine for two or three days. Should the bowels be constipated, Kurtz recommends the exhibition of toasted jalap with cretaceous pewder. According to Udall, iodine acts as a cathartic only, when the sensibility of the intestinal membrane has been morbidly heightened from its employment. In the first instance, it tends rather to suppress the mucous secretion, and consequently determine a confined state of the bowels. (Diss. de Effect. Iodinii, &c, Havniæ, 1833.)

The increased action of the urinary and salivary organs require no particular interference. Like digitalis, the diuretic effect continues long after its use has been intermitted. In some instances it has been known to discolour the urine, and occasion the precipitation of a black substance from that fluid.

(Udall, op. cit.)

Iodine, externally applied in the way of friction on the skin, occasions a yellowish brown stain, and a peeling off of the cuticle. Whether allowed to act by friction or by simple contact with an ulcerated surface, it uniformly causes a feeling of pricking and burning, which passes into that of itching, and lasts for several hours. It merits notice, that the intensity of this local effect progressively diminishes as the healing of the sore advances, so that, ultimately, the part becomes almost insensible to its influence. Should the ulcer relapse, a renewal of the local effects also recurs. Even after a few days have elapsed the appearance of the sore improves remarkably under treatment; and the topical cure makes often, in proportion to the constitutional disease, such rapid strides, as to render it expedient to give it the preference to all other external remedies.

In the form of baths, iodine is said to manifest its action both energetically and generally. The yellowing of the skin disappears commonly in the intervals between each bath, yet sometimes persists during the whole course of treatment; the burning sensation likewise endures for several hours, and is more violent than one would be led to imagine from the coloration of the skin.

If we take into account, however, the facility wherewith iodine is disengaged in the form of vapour, even at ordinary atmospheric temperatures, we should feel disposed to doubt the superior efficacy assigned to ioduretted baths. Whatever salutary effects these may produce, ought rather perhaps to be referred to simultaneous co-operation of the heat and moisture, with

stimulation of the cutaneous surface.

The conjunction of iodine with hydriodate of potash is the form most generally approved of for internal and external The hydriodate augments the solubility of the iodine. The ioduretted mineral water of M. Lugol is a solution of both these substances, so highly diluted, that each grain of iodine is accompanied by 6 or 8 ounces of water. Of the subjoined solution, Lugol gave, in the majority of cases, to children above seven, as the highest dose, 16 drops, twice daily; which is equivalent to the 6th of a grain of iodine, and the 3d of a grain of the salt, in the day.

> R Iodinii, gr. v. Potass. Hydriod., 9ss. Aq. destill., Zij. Solve.

S. To children under seven years 2 drops twice a day, gradually increased to 5 drops; to children above seven, the dose may be progressively advanced to 16 drops. common vehicle is half a tumblerful of water sweetened with sugar.)

He in no case prescribes the alcoholic tincture of Coindet, since he finds that the addition of water precipitates the iodine, which may thus irritate and corrode the coats of the stomach.

and thereby exert a poisonous agency.

M. Baudelocque likewise, orders iodine and hydriodate of potash dissolved together in water. His proportions are similar to those of M. Lugol, being 4th of a grain of iodine, and 4th of a grain of hydriodate of potash, to an ounce of water. the solution was stronger than this, it irritated the stomach and produced vomiting. He gradually increased the dose of this solution from 1 ounce to 12 ounces in the day,—that is, to 63 grains of the hydriodate of potash and 3 grains of the iodine daily; a dose considerably exceeding that of M. Lugol.

After persevering in the dose of iodine, in the quantity which he judged to be suited to each case, for from three to six weeks, he laid it aside for several weeks, during which the patients were put on the use of diluents and had one or two saline purgatives. In this cautious manner he often continued the medicine for many months, and generally with the effect of improving the general health and plumpness of the strumous patients, in the Children's Hospital at Paris, in a remarkable degree. (Clark, Op. cit.)

In whatever way iodine is internally administered to children, it is always proper to commence with minute doses, gradually increasing the quantity and watching its effects, attending carefully to the age and constitution, and suspending it at once on the manifestation of any untoward symptoms, such as pain of the stomach, or nervous irritability. Each dose ought to be given one or two hours after meal time, as it is then less apt to create nausea. The best vehicle is pure water, sweetened at the time with sugar, and flavoured with any agreeable aromatic. When it disagrees, the free use of amylaceous diluents with anodynes and emollient enemata, soon counteract all bad effects.

Like all powerful medicines the employment of iodine requires discernment. When the digestive organs are in a state of irritation, or when an inflammatory state of the mucous membrane prevails it should not be given; in great irritability and sensibility of the nervous system it is scarcely admissible; and when there is much emaciation, it is a very doubtful remedy. The same writer observes, that the use of mercury may frequently precede that of iodine with great advantage. The powerful effect of the former in promoting the biliary secretion and unloading the intestines, prepares the system for the more slow and general operation of the latter.

In the treatment of scrofula, the internal and external employment of iodine ought generally to be conjoined. And here it is worthy of remark, that the external application does not act merely as a local alterative, but extends its influence over the organism. Hence, the cutaneous absorption from external application, must always be taken into account in apportioning

the internal dose.

As a medicinal agent, iodine is most useful as a stimulating tonic, in cachectic states of the system, such as we often see in children which have been neglected or mismanaged, especially if unhealthy inflammation or ulceration tending to sloughing be present, as in *pemphigus*, &c. In congestion of the glandular and cellular system, and in cutaneous affections of a scrofulous character, as *favus*, *porrigo*, &c. it is of great utility. It is, moreover, recommended in scrofulous ophthalmia; in the scrofulous diseases of the joints or spine, assisted by perfect quiescence of the affected part and free exposure to pure air; and in obstinate watery diarrhæa, depending

upon a morbid condition of the mesenteric glands.

Iodine has been administered with advantage in chronic hydrocephalus, in doses which will not gripe or otherwise irritate the digestive canal; an alterative mercurial, as three grains of mercury with chalk being taken at bed-time, and an occasional cathartic, or terebinthinate enema given in the morning, during the course. If evident advantage do not follow the exhibition of the iodine within a fortnight or three weeks then a liniment, containing the iodine and hydriodate of potash, or the iodide of lead, should be rubbed on the head twice or thrice a day. If it causes irritation in the scalp, which will seldom be the case, the circumstance need not be deemed unfavorable. (Copland, Op. cit.).

Dr. Manson has exhibited iodine with success in chorea; and Dr. Copland in epilepsy, depending on a scrofulous taint.

In excessive doses iodine is a powerful irritant of the mucous membranes and nervous system. But, according to Dr. A. Buchanan, it is deprived of acrimony by combination with starch. (Med. Gaz., 1836). It has been known to occasion marasmus, fetidulceration of the mouth, and paralysis. Udall, who attributes its emaciating agency to its powerful excitation of the absorbents, found children far more obnoxious to its effects than adults.

Iodine may be used externally in the form of tincture with benefit in porrigo. Gassaud recommends the following treatment for the cure of scrofulous enlargement of the abdomen occurring in children: if with the hard and tumid belly considerable local tenderness and febrile commotion be joined, he premises the application of from four to eight leeches, repeated according to circumstances, to the umbilical region, or wherever the indurated glands are felt most prominently. He next directs the belly to be covered with a large poultice, giving internally mucilaginous drinks flavoured with syrup of oranges, and restricting the patient to the most slender diet. When, by

these means the morbid irritability has been removed, he directs frictions to be made over the surface of the abdomen, with from 20 to 60 drops of tincture of iodine, conjoined with warm baths, light nutritious food, and enemata to obviate

constipation. (Revue Médicale Française, 1830.)

Ioduretted ointments, employed in friction, have been found useful for promoting the reduction of glandular swellings, as bronchocele, &c. They ought to be recently prepared, and kept in a cool dark place. The intensity of the effect produced, will constitute the best guide for the frequency of their employment. M. Baudelocque recommends the following:

213.
R Iodinii, gr. xij.
Potass. Hydriod., 3j.
Adipis, 3j. M.

R. Iodid. Plumbi, 3j. Adipis, 3j. M.

215.
R Hydrarg. protiodid., 3ss.
Adipis, 3i. M.

The first and last ointments, he observes, produce in some cases a sensation of heat, of pricking, or of burning, which may

continue for a quarter of an hour.

Induretted lotions have been employed as injections between the eyelids in scrofulous ophthalmia; injected or snuffed up in scrofulous catarrhal affections of the pituitary membrane, and as an injection in sinuous ulcers. The following is prescribed by Frankel:

216.
R. Iodinii, gr. ij.
Potass. Hydriod., gr. iv.
Aq. destillat., lb.j.
Solve.

Lemasson (Journ. Hebdomadaire de Médécine, 1831,) recommends, as an addition to fomentations and poultices in inveterate scrofulous ulcers, the subjoined solution:

217.

R Iodinii, 3ij.
Potass. Hydriod., 3ss.
Aq. destillat., 3ij.
Solve.

And internally, at the same time:

218.

R Iodinii, 9j.
Potass. Hydriod., 9ij.
Aq. destillat., 3j.
Contere Iod. et Potass. Hydriod. in
mortario vitreo, sensim.
Aq. destillat. adde.

S. Thrice daily 4 drops, in half a glass of sugar and water.

Ioduretted partial baths are prepared by adding to the suitable quantity of warm water contained in a wooden vessel, as much of the following solution as suffices to impart a tolerably deep yellow tinge:

219.
R Iodinii, 3ss.
Potass. Hydriodatis, 3j.
Aquæ destill., 3vj.
M. Detur in vitro epistomate vitreo clauso.
Fränkel.

Induretted baths for children are made of moderate strength, by prescribing a grain of iodine and two grains of hydriodate of potash, for every quart of water. These baths ought to be given in a wooden tub, repeated two or three times a week. The temperature of the bath should range between 95° and 100° Fahr.—Fränkel.

For a full account of the therapeutic properties of iodine, the reader is referred to Dr. Cogswell's work on the subject.

IPECACUANHA. The powder of the root of the Cephaëlis Ipecacuanha, when swallowed in small doses, promotes secretion, especially from the bronchial and gastro-intestinal membrane. In somewhat larger doses it causes nausea, and disposition to sweating; and in still larger doses vomiting. It is supposed to exert a specific influence over the capillaries of the mucous membranes, through the medium of their nerves; hence, it relieves catarrh in opposite stages, either of dryness or excess of phlegm, by bringing the capillaries to a

normal condition. (See explanation in Billing's First Principles of Medicine). It is particularly eligible for children, on account of the mildness and certainty of its action, and may be given to the youngest infant. It will occasionally make a child vomit when tartar-emetic has failed, and never excites inflammation of the alimentary canal.

The primary effect of ipecacuanha is said to be that of stimulating the mucous membrane of the fauces and stomach; and its secondary effects depend on the numerous sympathies of

other parts with the digestive apparatus.

As an emetic, ipecacuanha is administered: in order to evacuate the stomach when overloaded with food, or when poison, especially opium, has been taken; in deranged states of the first passages; in jaundice, renewed every three or four days; at the commencement of fever; in inflammatory diseases, as croup, ophthalmia, cyanche; in hooping-cough; and in ear-ache.

M. Guersent employs ipecacuanha both as an emetic and nauseant in the second stage of croup after depletion. When a false membrane is formed in this disease, Dr. Copland recommends an emetic combination of ipecacuanha wine, with oxymel of squills, and decoction of senega. In hooping-cough also the compound of ipecacuanha wine with squills is a useful emetic.

As a nauseant, ipecacuanha has been ordered in hæmorrhagic diseases; in dysentery; in amaurosis; and in epilepsy. "When a child becomes hoarse and begins to cough," observes Dr. Cheyne, (Cyclopædia of Pract. Med., art. Croup,) "let every kind of stimulating food be withdrawn; let him be confined to an apartment of an agreeable temperature; have a tepid bath; and take a drachm of the following mixture every hour or two hours, if it produce sickness all danger will probably be averted."

220. R Vini Ipecac , 3iij. Syrup. Tolut., 3vj. Mist. Acaciæ, 3j. M.

In hooping-cough, after free vomiting, Mr. Pearson gave to a child of one or two years old, a draught containing 1 drop of tincture of opium, 5 drops of ipecacuanha wine, and 2 grains of

carbonate of soda, to be repeated every fourth hour for several days. The combination of ipecacuanha and rhubarb has been likewise found a valuable remedy in this disease. It is to be given at night, and the child meanwhile confined to a milk and vegetable diet; and during the existence of the catarrhal

symptoms to an equable temperature.

Ipecacuanha has been exhibited in exanthematous disease, when the rash threatened to recede. Schlesinger extols the infusion of ipecacuanha as particularly beneficial in scarlatina, and endeavours to explain its favorable effects by the close sympathies subsisting between the skin, stomach, and intestines, on all of which it exerts such decided agency. (Hufeland's Journal, 1814.)

Ipecacuanha is alone often sufficient to remove a slight catarrh, given in doses of a quarter or half a grain, three or four times a day. In like minute doses it corrects vitiated secretion in the chyloporetic viscera; hence its utility in improving digestion, as proposed by Daubenton, (Mémoire sur les Indigestions, 8vo. Paris, 1785); hence its utility in diarrhœa; and hence its utility in rickets, in conjunction with purges of calomel and

scammony.

Dose and form of exhibition. Ipecacuanha may be given as an emetic to the youngest infant in doses of half a grain or a grain, blended with sugar, and repeated every quarter of an hour until it vomits; or ipecacuanha wine may be similarly given, in doses of 20 drops,—half a teaspoonful or a teaspoonful. After a year old, these doses may be doubled and repeated at shorter intervals. On the Continent a syrup of ipecacuanha (containing 16 grains to the ounce) is used as we use ipecacuanha wine; or an infusion made by boiling 3ij. of the root in 3iv. of hot water, which may be sweetened and given in teaspoonfuls. (Evanson and Maunsell, Op. cit.) Madeira wine, with ipecacuanha root steeped in it, is an old popular remedy.

In order to produce its diaphoretic, expectorant, or stomachic effects, ipecacuanha ought to be given in doses of from the total the factorial of a grain, two, three, or more times in the day. Its nauseous taste is completely covered with gum arabic. It may be advantageously combined with corresponding remedies. Thus, as a sudorific, its effect will be heightened by joining it with Dover's powder, James's powder, or solution of acetate of ammonia, as recommended in epilepsy, when the skin is dry, after other evacuations have been premised. Its expectorant

powers are promoted by the addition of calomel, oxysulphuret of antimony, squills, &c.; and its stomachic ones, by that of some mild laxative, as magnesia. In diarrhœa it may be prescribed along with chalk. It is occasionally ordered along with extract of henbane, oxide of zinc, digitalis, and belladonna by the German physicians. Of an infusion made with from 10 to 30 grains in 3vj. of water the dose is a dessert or tablespoonful: a decoction or infusion forms a useful enema in dysentery.

221.

R Pulv. Ipecac., gr. ij.-iij. Cretæ, ppt., 3ss. Sacchari albi. 3iss.

M. ft. pulvis divid. in xii. partes æquales.

S. A powder every three hours.

223.

R Aquæ, 3j. Vini Ipecac., 33s. Syrupi, 3ss.

S. One to two drachms frequently, till vomiting ensue. Evanson and Maunsell.

225.

R Pulv. Ipecac. Calomel, ää, gr. x. Sacch. albi, gr. xx.

S. One or two grains every second or third hour, as an expectorant in severe cases of bronchial irritation .- Evanson and Maunsell.

222.

R Pulv. Ipecac., gr. iij. Pulv. Acaciæ Magnes. Carb. āã, 3ss. Sacchari albi, 3j.

M. ft. pulvis divid. in xij. partes æquales.

S. A powder every two hours, in hooping-cough.-Vogler.

224.

R Radicis Ipecac., 9ss—3ss. Inf. in s. q. Aq. ferv. per å hor.

Colatur, 3vj. refriger. adde.

Sp. Æth. Nit., 9j.—3j. Ol. Juniperi, niv. c. Sacchar. alb., 3j.

м.

S. A tablespoonful every second hour, in dropsical effusion after scarlatina .-- Wendt.

226.

R Pulv. Ipecac., gr. \(\frac{1}{4}\), Carb. Sodæ Siccat., gr. j. Pulv. Ipecac. Co., gr. 1/2. Pulv. Cretæ Co. vel c. opio, gr. ij.

S. Sedative powder, one to be given every third hour. Evanson and Maunsell.

R Infus. Menth., 3iss.
Vini Ipecac., 3iss.
Sodæ sesquicarb., gr. xij.
Syrup. Aurantii, 3ij.
Tinct. Opii, gtt. iv.

S. Sedutive mixture; one or two drachms to be taken every second hour.—Evanson and Maunsell.

JALAPA. The root of the *Ipomæa Jalapa*, is an active cathartic, and as such is frequently administered to children. It has the power of quickening the direct peristaltic action of the alimentary canal, particularly along its middle tract, and promoting a copious discharge from the exhalents on the surface of its mucous membrane. In a moderate dose it purges without griping. Its use is indicated in torpid and overloaded states of the bowels; in excessive mucous secretion, forming a nidus for the generation of worms; and to dislodge vitiated bile, and propel it along the duodenum. Wherever it is found necessary to act widely on the bowels, and produce serous discharges and so keep up depletion, as in certain forms of dropsy, there is no remedy superior to the compound powder of jalap.

The watery extract, owing to the mildness of its operation, is well adapted for children. It is rendered active and deprived of its griping qualities by camphor. The powder of the root is however most efficacious. It ought not to be prescribed when the liver or stomach is disordered, as then it is apt to disagree,

and determine vomiting, griping, &c.

Rauch recommends in diarrhæa, proceeding from relaxation of the bowels with abdominal distension, a powder twice or thrice daily, composed of from 1 to 3 grains of jalap, with half a grain or a grain of nutmeg or fennel-seed.

Dose and form of exhibition. The dose of jalap is for infants under twelve months old, 2, 4, or 6 grains, (Hufeland gave to infants only two or three months old, 4 or 6 grains); to children of two or three years 6 to 10 grains; and to older children 15 grains. Its purgative qualities are heightened by combination with calomel, bitartrate of potash, neutral salts, and tartar emetic. In union with ipecacuanha it is eminently useful when we want a purge during inflammation of the chest.

For infants, magnesia, sesquicarbonate of soda, or calomel

(½ gr. to 3 grains) is the best adjunct.

As a corrective of its nauseous taste, a little oil of lemons, triturated along with sugar, answers well. As an addition to calomel, in inflammatory diseases, accompanied with constipation, from 3 to 5 grains will suffice. In such cases, Gölis gave the preference to toasted jalap, as being less apt to cause vomiting or colic pains.

The pure resin, triturated with sugar or with almonds into the form of an emulsion, or dissolved in spirit and mixed with syrup, purges plentifully in a small dose, without occasioning much disturbance. (Coxe, Op. cit.) The tincture of jalap may be given to infants a month old in the quantity of a few

drops.

The Montpellier Hospital has a convenient formula for purgative biscuits, containing jalap, which is subjoined, from Drs. Evanson and Maunsell's work; it is equivalent to the old

English jalap gingerbread.

"Take an ounce of flour, and an ounce of sugar, two eggs, and one drachm of powder of jalap; let three biscuits be made, a quarter of one of which will contain 5 grains of jalap; and may be taken once or twice a day, according to the effect."

228.

R Polv. rad. Jalapæ, gr. xxiv.

Calomelanos, gr. iv. Sacchari albi, 3ij.

- M. ft. pulvis. divid. in xij. partes æquales.
- S. A powder twice a day for a six months' infant, in obstruction of the bowels.-Wendt.

230.

R Pulv. rad. Jalapæ, gr. xv. Calomelanos, gr. iij. Oleo-sacch. Citri, Əj.

M. ft. pulvis.

S. For a child six or eight years of age.—Henke.

229.

R Pulv. rad. Jalapæ, Əij.-3j. Calomelanos, Əj—ij. Extr. Hyoscyami, gr. ij. Oleo-sacchari Citri, 3ij.

M. ft. pulv. divid. in x. partes æquales.

S. A powder morning and evening for children, from three to six years old, troubled with ascarides.—Wendt.

231.

R Pulv. rad. Jalapæ, gr. x. Pulv. Ipecac., gr. iij. Confect. rosæ, q. s. ut fiat bolus.

S. One in the morning.

R Pulv. rad. Jalapæ, gr. iv. Calomelanos, gr. iss. Pulv. Ipecac., gr. ss.

M. ft. pulvis.

S. Purgative for a child.

233.

R Pulv. rad. Jalapæ, gr. j. Hydrarg. c. cretâ, gr. iij. M. Sit pulvis.

S. One night and morning in infantile jaundice.

JUNIPERI FRUCTUS. The fruit of the Juniper, is represented to be a mild balsamic remedy, exercising a stimulant action on the skin, the mucous membrane of the respiratory apparatus, the abdominal glands, and the urinary organs. It excites less than other remedies of the same class; and can therefore be exhibited in cases where more heating diuretics are improper. To the presence of volatile oil it owes its stimulant, carminative, diaphoretic, and diuretic properties. It appears, indeed, from a table drawn up by Mr. Alexander, of Edinburgh, (see Duncan, Op. cit., p. 60,) that this oil is one of the most powerful diuretics known. Its use is indicated in hydropic affections depending on suppression of the functions of the skin, as that occurring during the desquamation from scarlatina, or on atony of the abodminal viscera.

Dose and form of exhibition. Fränkel recommends an infusion of the juniper berry, made with 3ij.—3ss. and a pound of boiling water, after filtration, to be drank at intervals in the course of the day. He further recommends a decoction in beer as remarkably diuretic, (3ij. to 3xvj. boiled down to one-half.) The filtered liquor to be consumed in the twenty-four hours. The essential oil may be given in the dose of 3 or 4 drops in ptisan, and advantageously combined with the spirit of nitrous ether.

LAC. Milk, constitutes an indispensable article of infantile dietetics. When the mother is unable to suckle her child, and a competent nurse cannot be procured, recourse must be had to such aliment as assimilates most to the infantile organism.

Good cow's milk is usually the most convenient substitute for the natural nutriment; and as it is thicker, and not so sweet as human milk, we may add to two parts of it, previously boiled and skimmed, one of very thin barley water, and sufficient white sugar to impart the necessary sweetness. When the child is upwards of six months, the milk may be given undiluted.

Asses' and mare's milk approach more nearly in sensible properties to the milk of the human female. The former is richer, and requires to be diluted with about a third part of water. So modified it may be employed if cow's milk disagree, or if it can be conveniently procured. Mare's milk is distinguished from other kinds, in containing a larger proportion of the sugar of milk, and a smaller proportion of cream and curd.

Joerg allows during the first few days after birth only sweet

whey, until the motions assume a yellow colour.

In rearing by hand, the liquid food ought to be sucked out of one of the flattened glass bottles made on purpose; to the mouth of which is to be attached an artificial teat, made of softened parchment or wash-leather, inclosing a small conical

piece of sponge.

In reference to its therapeutic qualities, milk, whether employed internally or externally, exercises a gentle soothing influence. It has been used in the form of baths and enemata, as a means of supplying nourishment when deglutition is impossible; and also to relieve infantile convulsions. It is said to be of great use, diluted with water and given either as a drink or as an enema, in allaying the constitutional disturbance induced by worms. Rosenstein recommends in such cases an enema made of six parts of milk, with three of oil, and a little sugar.

Hufeland employed with success in spasms, milk fomentations to the feet, renewed every hour, for four and twenty hours consecutively. Krukenberg (Klinische Jahrbücher) extols repeated draughts of milk, as an efficient diuretic in the dropsy [following, scarlatina. He directs, at the same time, warm fomentations of camomile and elder flowers over the

region of the bladder. (Fränkel.)

LAURI BACCÆ. The berries of the laurus nobilis, or bay tree, have an aromatic flavour, joined to a bitterness due to the presence of volatile oil. It is said they quicken the circulation and nervous energy, resembling, in therapeutic action, nutmeg. Gölis recommended their employment in scrofula. He directed the berries, after being dried in an oven, to be mixed with equal parts of horn-shavings and powdered nutmeg, and double the quantity of liquorice powder. Of this, his

"pulvis antihectico-scrofulosus," he gave to infants under a year, half a teaspoonful, and to children of two or three years old, a teaspoonful twice a day. He sometimes combined it with antimony and steel. Meissner impugns the efficacy of the above compound. But Barthel (Diss. sistens. conspect. morbor. a 1828—1829 in schola polici. Lipsiensi curat. Lips. 1830,) ascribes to it beneficial qualities. (Fränkel.)

The oil is a stimulant and rubefacient.

LIMONUM SUCCUS. The juice of the fruit of the citrus limonum, or lemon, abounds in citric acid. It is a grateful refrigerant, and is much employed to saturate the bicarbonate of potash, or ammonia, in forming the common effervescing draught for checking vomiting. Largely diluted with water and sweetened with sugar, it forms an agreeable beverage in fever, allaying heat and irritation, and reducing the pulse. It has been much employed in scorbutic affections. Dr. P. H. Green has recently published some cases illustrative of the efficacy of citric acid, in purpura occurring in children. (Lancet, 1837.)

Lemon juice has likewise been given with advantage for the relief of hiccough in children. It has been externally applied

as a lotion in tinea capitis.

LINI SEMINA. Linseed, is employed as a demulcent, from its containing a large proportion of clear, viscid, colourless mucilage, which it yields to boiling water. This mucilage resides in the testa of the seeds.

The watery infusion, or linseed tea, is administered in catarrhal affections, in disorders of the urinary organs, in spasms and inflammatory states of the bowels, and wherever it is desirable to defend the alimentary mucous membrane against irritant matters.

Dose and form of exhibition. About half an ounce of the unbruised seeds is sufficient for a pint of water. Of such an infusion a small teacupful may be given from time to time. The farina of the seeds is well adapted for poultices.

LIQUOR AMMONIÆ. Caustic ammonia, is of too acrid a nature to be administered internally to children, unless in the form of its aromatic spirit. Hecker, however, (Magazin der Pathologischen Anatomie und Physiologie, Heft. i.,) recom-

mends it in the dose of a drop or two mixed with syrup, for

relieving the irritation attendant on dentition.

Inflammation of the first passages, an excited, followed by a depressed and paralysed condition of the nervous principle, involving the motor tract of the medullary system, and inducing convulsive and tetanic symptoms, are the diagnostic marks of its noxious agency. (Handbuch der praktischen Toxikologie von Sobernheim und Simon, 1836, p. 379.) To obviate these, the patient ought to drink freely of weak vinegar and lemonjuice, and observe a strictly antiphlogistic regimen.

Largely diluted with water, it has been given at repeated short intervals, to counteract the poisonous effects of prussic acid; but requires to be followed by a solution of sulphate of iron, so as to convert the resulting hydrocyanate of ammonia

into prussian blue.

Applied externally in the form of embrocation, (in the proportion of 3ss. to 3j.—3ij. of fluid,) it acts as a stimulant and antispasmodic. A drachm of caustic ammonia, incorporated with as much hog's lard, and 6 grains of suet, constitutes the epispastic salve of M. Trousseau, which may be employed whenever prompt vesication is required.

R Sp. Rosmarini, 3ij. Liq. Ammon. Tinct. Opii, āā, 3ss. M. fiat embrocatio.

S. To be rubbed over the chest and along the spine, in cases of spasmodic croup and convulsions.

LIQUOR AMMONIÆ ACETATIS. The solution of acetate of ammonia, or spirit of mindererus, according to the old nomenclature, may be made to exercise either a diaphoretic or a diuretic action. The former effect being produced if the surface of the body be kept warm, and copious draughts of hot diluents swallowed; the latter effect, if the patient remain cool. It does not quicken the circulation, but tends to lower the pulse and abate febrile heat.

Its use is indicated, in inflammatory and febrile diseases, attended with cough and other catarrhal symptoms, and caused by suppressed perspiration; in acute exanthemata; and in rheumatism. The experienced Wendt advises us not to exhibit

this remedy at too early a period in acute eruptive diseases. And in scarlatina, he says, it ought only to be prescribed as a diaphoretic in the advanced stage, when the dry and burning skin has become moist. Where, therefore, it is our intention to promote the crisis, (which, in the majority of cases, will be best attained by a procedure conformable with the indications,) and where the disease inclines to the asthenic type, there will the solution of acetate of ammonia find its place, and exert a beneficial diaphoretic agency.

Dose and form of exhibition. The solution of acetate of ammonia may be given internally in the dose of from a scruple to a drachm in saline jalap, along with antimonial wine.

Externally it is employed as a gargle in sore throat; and Mr. Wardrop recommends, for weak watery eyes, a collyrium consisting of one part of it, with two parts of camphor mixture.

235.

R Liq. Ammoniæ acet., \bar{z} ss. Vini Antimon., \bar{z} ss. Aquæ destill., \bar{z} iij. Syrupi Aurantii, \bar{z} ss. M. fiat mistura.

S. A spoonful every two hours.—Wendt.

236.

R Liq. Ammon. acet., 3vj Ammoniæ hydrochlor., 3j. Mellis rosæ, 3j. M. fiat injectio.

S. A small syringe-full (about an ounce) to be injected into the throat, every halfhour, in scarlatina anginosa. Fischer.

237.

R Liq. Ammon. acet., 3iij.
Vini Antimon., 3iss.
Aq. Sambuci, 3iij.
Syrup. Althææ, 3ss.
M. fiat mistura.

S. A tablespoonful every second hour, in measles and other exanthemata.-Hufeland.

238.

R Potassæ Bicarb., gr. xxv.
Succi Limonum, q. s.
ad saturationem.
Adde postea
Aq. fontan., 3viss.
Liq. Ammon. acet.,
Syrup. Limon., āā, 3ss.
Vini Antimon., 3j.
M. ft. mist.

S. A tablespoonful every second hour.

240.

R Infus. flor. Sambuci, Zviij. Liq. Ammon. acet. Mellis rosæ, āā, 3j. M. fiat gargarisma.

R Aquæ destill., Zviiss. Sp. Vini rectif. Liq. Ammon. acet., āā, 3ij. M. fiat collyrium.

S. For scarlatina. Wendt.

LIQUOR BARII CHLORIDI. See BARII CHLORIDUM.

LIQUOR CALCII CHLORIDI. See Calcii Chloridum.

LIQUOR CALCIS. Lime-water, is antacid, and said to have a power of allaying irritability of the stomach, superior to other congenerous remedies. It promotes the secretion of a more healthy gastric juice; and dissolves the slimy mucus with which disordered bowels are generally infested. It sometimes, however, tends to produce disorder in the first passages, and in order to counteract such prejudicial effects, it is advised to combine with it some light bitter or stomachic.

Lime-water has been long held in estimation; Hufeland employed it extensively as an alterative in scrofulous diseases of the osseous system; in glandular swellings; in mesenteric

disease; and even in incipient tuberculous phthisis.

Wichmann extolled it as a specific in the treatment of porrigo After him, Lentin and Jahn have certified its larvalis. efficacy.

As lime-water has rather a restringent quality, it agrees better when there exists a disposition to relaxed, than constipated bowels.

Dose and form of exhibition. Liquor calcis may be given in the dose of 1 or 2 ounces twice or thrice in the day. Dr. Paris says, that, mixed with equal parts of milk, it furnishes an excellent remedy in infantile complaints connected with bowel But milk, while it disguises its flavour, impairs its virtues, in consequence of a saponaceous compound being formed with the oily portion or cream. It may be also ordered in beef-tea or in a decoction of sarsaparilla or cinchona.

Externally, it is applied with benefit as a lotion in tinea capitis, and in acne. Dewees recommends in the case of mucous discharge from the ears, an injection composed of 2 teaspoonfuls of milk and lime-water, with the addition of 20 drops of tincture of myrrh. Lime-water has been used as a detergent to foul ulcers, and sloughing fauces. Hufeland recommends in ascarides enemata of lime-water diluted with gruel; and their efficacy has been more recently attested by Nicola. (Casper's Wochenschrift, 1833.) In an obstinate case of porrigo scutulata, Horn succeeded in softening the crusts, by means of the common liniment made with linseed oil, when all other measures failed.

241.

R Liq. Calcis.
Syrup. Simp. āā, 3ss.
M. fiat linetus.

S. To touch spongy granulations.—Wendt.

242.

R Liq. Calcis.

Mucilag. Cydoniæ, āā,

Žiss.

M. Sit. linctus.

S. To be applied to the fauces in malignant angina.—Wendt.

243.

R Liq. Calcis, Ziij.
Mist. Acaciæ, Zss.
Syrup. Tolut., Zj.
M. S. ut supra.—Berends.

LIQUOR CHLORINII. The aqueous solution of *chlorine* gas, according to Fränkel, acts in a manner somewhat analagous to muriatic acid, but is milder, its influence being more directed to the lymphatic and glandular system, and the skin. It diminishes the force of the circulation, lowers febrile heat and vascular erethism, and appears, when absorbed into the system, to possess almost antiphlogistic powers. It has, therefore, been employed in the following diseases of early life:

1. In the violent febrile irritation of dentition, in catarrhal and erysipelatous ailments. Kopp derived great benefit by ordering it, when powerful determination of blood to the head threatened convulsions or stupor; here it repressed the fever.

promoted the crisis, and speedy convalescence. He points attention to its effects on the gums, lips, and fauces, and recommends it in the inflammatory state of these parts. Mühlhausen (Rust's Magazin, Bd. 26) and Soscher (Hufeland's Journal, Bd. 66) concur as to the above facts, and maintain that children bear well the solution of chlorine, in consequence of the predominance of the lymphatic and glandular system.

- 2. In scarlet-fever, when the eruption is of an ardent red, the fever intense, the head affected; and also in those instances when the inflammation threatens to pass into the putrid stage. In scarlatina anginosa, Dr. Marcus prescribes it, according to a subjoined formula (244), to be slowly swallowed, that it may act the part of a gargle. Soon after its employment, mucus is freely secreted, the intumescence of the tonsils, uvula, and fauces subsides, together with the pain, and deglutition becomes easy. (Pfaff's Mitth. ii. Jarhgang, H. i. and ii.) Rayer, however, considers it positively injurious in scarlatina.
- 3. In cholera, diarrhœa, and affections generally of the gastro-intestinal mucous membrane, the solution of chlorine is held by Blasius to be an invaluable medicine.
- 4. Capuron recommended it in congenital syphilis, and Heyfelder (Beobachtungen über die Krankheiten der Neugebornen, 1825) thought it might be of use in induration of the cellular tissue.

Dose and form of eahibition. Internally, Pfeufer gave children, from three to six years old, \$\frac{3}{5}\text{ss.}\$.—\$\frac{7}{3}\text{j.}\$ in the twenty-four hours. Kopp gives \$3\text{ij.}\$; but in urgent cases, as violent angina, incipient stupor, he prescribes from \$\frac{7}{3}\text{ss.}\$.—\$\frac{7}{3}\text{v.}\$ in the same space of time. Braun advises it to be given in the quantity of a teaspoonful every second or third hour to children three or four years old. The most suitable vehicle for it, is distilled water sweetened with syrup. Wittke (Medizinisches Conversationsblatt, 1831) gives, to infants of six months old, \$\frac{7}{3}\text{j.}\$ daily in divided doses, to those of a twelvemonth \$3\text{iss.}\$, and to those under two years \$3\text{ij.}\$ The solution of chlorine has been applied externally in the form of linctus (with equal parts of honey) in stomatitis, asthenic sore throat, and aphtha. It has also been used as a liniment in tinea capitis; and as a gargle in the proportion of \$\frac{7}{5}\text{ss.}\$ to \$\frac{7}{5}\text{y.}\$ of pure water.

245.

R Liq. Chlorin., 3ij.—3ij.
Aq. destill., 3iv.—3vj.
Mucilag. Cydoniæ.
Syrup. Althææ, āā, 3ss.
M. Detur in vitr. chart. nigr.
velat.—Marcus.

R Liq. Chlorin. Syrup. Simpl. aa, Ziv. M.

S. A tablespoonful in a cup of cold gruel, as a cooling drink in fever.

246.

R Ol. Olivarum, Zj. Liq. Chlorin., 3iss.—3ij. M.

S. A liniment in tinea.

Breickmann.

LIQUOR POTASSÆ. The solution of hydrate of potash, when swallowed in a diluted form, neutralizes any existing acidity in the first passages, and promotes diuresis. It further promotes the biliary secretion, and renders that of the mucous membranes more fluid. It influences the absorbent functions, and has, thence, been successfully administered in congestive states of the lymphatic and venous system. Its alterative action on the skin is evinced by its allaying cutaneous irritation; thus, its effect in correcting the disposition to pimples and boils is very striking.

Its prolonged exhibition in infants tends to induce morbid softening, and even erosion, of the gastro-duodenal mucous membrane. Hence, it ought never to be ordered to very young

children for any length of time.

Brandish and Farr recommended the internal use of the hydrate of potash in scrofulous affections. They directed from 5 to 10 drops to be taken by children four or six years old, and 10 or 15 drops by those a couple of years older in any mucilaginous vehicle, twice a day. Dzondi pursued with success the same line of treatment, gradually augmenting the doses. He gave the medicine continuously from a fortnight to six weeks, according to the exigencies of the case. Wetz (Hufeland's Journal, Bd. 58) prescribed it in combination with orange-flower water. It is in the torpid forms of struma with tendency to abdominal plethora, that it proves of most service. A course of liquor potassæ has occasionally effectuated

the removal of adipose tumours; and the cure of lepra, psoriasis, and some other skin diseases, when combined with decoc-

tion of elm bark, or sarsaparilla.

Dose and form of exhibition. The concentrated solution of hydrate of potash corrodes, penetrates, and dissolves the soft animal tissues. Hence, the proper vehicles for its administration are mucilaginous diluents. The dose has been already indicated. But for young people approaching puberty as much as a drachm may be given once or twice in the day.

The liquor potassæ, in a diluted form, has been applied as a lotion to scrofulous sores, and as a cure for scabies. M. Malapert considers that any dissolved caustic, which, without altering the healthy portion of the skin, can act directly upon the disease, is capable of curing scabies. The time required for potash is a little above a fortnight. (British and Foreign Medical Review, Oct. 1837, p. 515.) Alkaline baths are sometimes recommended by the German physicians. They assign from 2 drachms to half an ounce of the hydrate of potash for a single bath.

Where an overdose has been swallowed the antidotes are the same as indicated for caustic ammonia. Namely, diluted vegetable acids, aided by mucilaginous demulcents. The administration of almond oil, proposed by Chereau, is advantageous. Partly by its promoting emesis, and partly by its combining with the alkali, so as to form an innoxious saponaceous

compound. (Sobernheim and Simon, Op. cit., p. 354.)

Respecting this article of the LOBELIA INFLATA. materia medica, there exist various and contradictory opinions; it being considered by some a most dangerous narcotic poison, when given at all liberally, and by others as perfectly safe in any quantity. According to M. M. Douglass and Babcock. (Trans. of the Med. Society of the state of New York, vol. ii. 1835,) it possesses an acrid principle, which is highly stimulating to the mucous coat of the stomach, and is capable, when exhibited in large quantities, and continued for a length of time, of producing gastritis; and can scarcely fail of aggravating that state, when it already exists. Given in liberal doses, it produces a nausea somewhat resembling that from tobacco, attended with a feeling of debility, generally with a copious perspiration and a most remarkable diminution in the frequency of the pulse, sometimes from 130 to 50 or 60 in the minute. Large doses

are occasionally followed by coldness of the extremities, rigors, and delirium. As an emetic, its operation is free, prompt, and easy; but it sometimes produces considerable pain in the stomach, which continues after the emesis. Possessing such ready emetic and diaphoretic powers, and exercising a control over the circulation, not equalled by any other article that can be considered safe for ordinary use, it cannot fail to be a remedy of great value. In addition to these properties, it is perhaps the most prompt expectorant we have. In pneumonia, after bleeding, it is a very efficacious remedy, given in nauseating doses. Combined with digitalis, it is an excellent substitute for antimony. It cures an attack of catarrh or influenza very speedily, and has an excellent effect in coughs produced by cold. It has been found useful in the suffocative stage of hooping-cough, and in humoral bronchitis.

Dose and form of exhibition. The best form of exhibiting the lobelia is that of an ethereal tincture. It may be given, according to age, in the dose of from 5 to 20 drops, in any aromatic water sweetened with syrup, and progressively increased if it do not disagree.

247.
R Tinct. Lobeliæ, 3j.
Aq. Cinnam., 3jj.
Syrup. Croci, 3j.
M. ft. mist.

S. A teaspoonful every two or four hours, in hooping-cough.

LUPULUS. The dried strobiles of the humulus lupulus or hop, contain an agreeable bitter, conjoined, according to some, with a feeble narcotic. The infusion and tincture of hop act as gentle aromatics, improving the appetite and digestion. Of the infusion, from 2 drachms to half an ounce may be given, thrice daily.

LYCOPODII SEMINA. The seeds, or fine dust, of the *lycopodium* or *clubmoss* contain about six per cent. of fixed oil, three of sugar, and one and a half of mucilage.

Some eminent German physicians have exhibited the lycopodium in infantile diseases. Javandt and Hufeland first employed

it as a remedy in the dysuria and convulsions arising from vesical irritation, concomitant on dentition, and with signal Following their example, several other practitioners have certified its beneficial agency in such instances. we are informed in the fifth volume of Tode's Journal, that a child, dangerously ill of violent dysuria, received almost instantaneous relief; and Busser (Hufeland's Journal, Bd. 36) cured, by its means, a strangury connected with difficult teething. According to Jahn, (Medizin. Conversationsblatt, 1831,) lycopodium also exercises an antispasmodic and soothing influence, which may be advantageously prescribed in nervous and spasmodic colic. He has witnessed its powers of subduing spasmodic disorders of the urinary organs, not in children only, but likewise in adults. He speaks of its utility in hysteria, asthma, and hooping-cough; but he considers it more especially adapted to the infantile organism, on account of the delicate, mobile, and impressible nature of the nervous system in early life. Thus, in colic fits, in which the child emits a sudden scream, refuses the breast, retracts its feet towards its abdomen, becomes cold and pale, and after voiding some grass-green feculent matter, mingled with mucus, which often proves acrid and excoriating to the parts with which it comes in contact, is restored to a state of tranquillity, he has known the lycopodium, administered in mucilaginous drinks, procure an immediate calm, when antacids, laxatives, &c. have failed.

In another form of spasmodic affection, implicating the respiratory apparatus, he has also found its utility. Here the little patients become cold and pallid, gasp for breath, emit a rattling noise, cough in paroxysms, and occasionally vomit, but without

manifesting any feverishness.

Dose and form of exhibition. The clubmoss may be given internally, according to the age, to the amount of a scruple or drachm in the twenty-four hours in linetus, mixture, or emulsion, (with gum arabic, syrup of marsh mallows, and the like.)

Externally it is employed as a dusting to excoriations in the case of infantile intertrigo, being at once efficient and innocuous. When the surfaces become ulcerated it may be applied with advantage in the form of ointment mixed with equal parts of oxide of zinc.-Frankel.

L

249.

R Sem. Lycopodii, 3ij.

Syrup. althææ, Ziss.

R Semin. Lycopodii. Pulv. acaciæ, āā, 3j. Conf. amygdalæ, q. s. ut aliquot aquæ.

Aq. Fæniculi, Zij. fiat electuarium ope gtt. M. ft. mist.

S. A teaspoonful every two hours.—Henschel.

S. A spoonful every second hour, shaking it well each time. Hufeland.

250. R Semin. Lycopodii Oxydi Zinci, āā, 5j. Axungiæ, 3ss. Misce exactissime ut sit unguentum.-Rosenstein.

MAGNESIA. All the preparations of magnesia are simply laxative: they operate mildly yet with sufficient energy when they meet with acid enough to convert them into muriates and acetates. They are well adapted for infants and children, since, as Dr. A. T. Thomson observes, "the prevailing acescency of the stomach and intestines insures their operation, and the irritability always attendant on dentition is greatly allayed by the magnesia operating on the sentient nerves of the stomach." (Op. cit. p. 274, vol. ii.)

Magnesia, when incautiously used for a long time, has been known, in the instance of adults, to produce serious evils, dependent on the formation of intestinal concretions; but when administered in moderate doses to infants and children. owing to the constant predominance of acidity in alimentary canal, and the vivacity of the peristaltic action, no

such formidable results need be apprehended.

For the purpose of correcting acidity, and improving the secretions of the bowels, magnesia and its carbonate are in Hufeland, in treating of the therapeutic effects great repute. of magnesia and other earthy carbonates, expressly says, that, independently of their absorbing and neutralizing acid and other acrimonious matters, and depriving them of injurious properties, they also exercise a physiological action.

simple gastro-intestinal irritation, unaccompanied with any appreciable acidity, they seem to produce a direct sedative influence. By enveloping the nervous extremities with a sort of protecting layer, their sensibility and impressibility are diminished, the extension of irritation to remote parts is pre-

vented, and the chain of morbid sympathies destroyed.

From what has been said, the indications for the use of magnesia may be easily discovered. Acidity in the first passages, disordered secretion of the gastro-enteric fluids, and the thence resulting affections, eructations, colic, diarrhea, with green chopped stools, constipation, yield to its exhibition. Calcined magnesia neutralizes the acid of the stomach, without any extrication of gas, which is often troublesome in weakened states of that organ. To relieve flatulency, magnesia may be ordered in dill-water, or in fennel-water, or in anise-water, with an alterative, as mercury with chalk, on alternate nights. order to secure infants from colics and other serious and dangerous evils, Dr. M. Hall directs a dose of magnesia to be given over night, in the infant's last meal, and made operative, if necessary, by the lavement next morning. (Underwood, note to p. 55.) In diarrhea, excited by improper food, or redundancy of food, or attended with acute fever, and especially if the child be plethoric, it will be useful to give the magnesia combined with rhubarb. This same combination, taken in mint-water, relieves infantile hiccough. In constipation and the disorders consequent thereupon, magnesia may be prescribed along with dill-water, sweetened with syrup of roses, or manna. Its laxative operation will be quickened by the addition of a few drops of tincture of senna. Dr. Cheyne found a drachm or two of magnesia, saturated with lemon-juice, given every two or three hours, most serviceable in hydrocephalus, when the stomach was irritable and rejected every other kind of aperient. I may add that in the "watchings" of children, which is generally symptomatic of gastro-intestinal irritation, magnesia often acts like a charm.

In most of the instances above enumerated, magnesia is to be considered rather as a means of palliation than of radical cure. The stomach, says Henke, is not an alembic, but a living organ: its vitality being disturbed, its secretions become vitiated; and the fundamental cause of such functional aberration will be more promptly and efficiently removed by regu-

lation of diet, and the judicious use of mild stimulants and tonics, than by the whole list of antacids and absorbents.

Dose and form of exhibition. The dose of carbonate of magnesia is, for children under five years of age, from 2 to 10 grains, and for older children 15 grains, twice or thrice in the day. It may be given in linctus or mixture, and may be combined with various aperient, antispasmodic, aromatic, and bitter remedies. It constitutes the chief constituent of most of the carminative mixtures and powders for children. The dose of calcined magnesia, may be somewhat less than the above. Milk is the best vehicle.

251.

R Aq. Fæniculi, Ziv. Magnesiæ carb., gr. xv. Liq. Opii sed., gtt. ij. Syrup. Althææ, Zss.

M. Sit misture.

S. A spoonful every two hours, shaking the phial each time, for a child of two years old, labouring under colic from acidity.—Gölis.

253.

R Magnesiæ carb.
Potass. tart., āā, ʒj.
Potass. nitr., 3ss.
Mannæ, 3vj
Aq. Fæniculi, ʒj.
M. Sit mistura.

S. A teaspoonful every two hours.—Hufeland.

255.

R Magnesiæ ust., gr. xij.
Tinct. Opii, gtt. iij.
Aq. Fæniculi, \(\frac{7}{3} \).
Syrup. Rhei, \(\frac{7}{3} \)ss.
M. Sit mistura.

S. Dose, a teaspoonful, shaking the phial each time, in cases of aphtha.—Dewees.

252.

R Magnesiæ carb., 3ss. Tinct. Rhei, 3j. Aq. Menth., 3vj. Syrup. Althææ, 3j. M. Sit mistura.

S. A teaspoonful every hour, for an infant of six months old, troubled with acidity of stomach.—Vogt.

254.

R Magnesiæ carb., 5iij. Pulv. Sem. Anisi, 3ij. Croci, 3ss. Syr. Rhei q. s. ut ft. Electuarium.

S. By teaspoonfuls.—Richter.

256.

R Magnesiæ carb., Əij. Pulv. Rhei, Əj. Aq. Fæniculi, Ziss. Syrup. Rhei, Zss. M. Sit mistura.

S. Dose, a teaspoonful.

Berends.

258.

R Magnesiæ, gr. viij. Semin. Anisi Cont. Semin. Fœnic. cont. āā, gr. ij. Croci, gr. j. Sacch. albi, gr. vij. Contunde bene simul ut sit pulvis.

S. In the tormina of infants, one-half to be taken at once, and the remainder in half an hour.—Copland.

R Magnesiæ. Sacch. albi, āā, 3j. Pulv. Cort. Cannell. Semin. Fœnic. cont. aa, gr. x. Olei Anisi, mviij. Tere bene simul et divide in chartulas xij.

S. One twice or thrice a day in infantile tormina.

Copland.

259.

R Magnesiæ ust. 3ss. Sacchari albi, 9j. Ol. Anisi, Mv. Tere bene simul et adde Aq. Fœniculi, Ziss. Sp. Ammon. Fætid., mxv. Pulv. Rhei. gr. xvj. Syrup. Papav., Zij. M. Sit mistura.

S. One or two teaspoonfuls every three or four hours, in colic, after a dose of some aperient.—Copland.

260.

R Aq. Carui, 3j. Mist. Acaciæ, 3ss. Magnesiæ ust., gr. xxiv. Olei Cajuputi, gtt. iv. Syrup. Croci, Zss. Sp. Ammon. Fætid., 3ss. M.

Carminative mixture. Dose, half a drachm to drachm thrice a day.

Evanson and Maunsell.

MAGNESIÆ SULPHAS. Sulphate of magnesia or Epsom salt, is a mild and gentle purgative, operating with sufficient efficacy, and in general with ease and safety, rarely occasioning gripes, sickness, or other inconvenience, except flatulence, which may be obviated by combination with some aromatic or bitter infusion, such as that of cascarilla, ginger, or calumba. operates chiefly on the duodenum. A solution promotes evacuation by other emunctories; if the patient be kept warm it increases perspiration; and by moderate exercise in the cool air, the urinary discharge. Some writers allege that the salt

has a peculiar effect in allaying pain, as in colic, independently of any evacuation. Dilution aids its purgative effect: but, according to Dr. A. T. Thomson, the diluent ought to be taken half an hour after the salt, in order to give that time to stimulate the excretory ducts of the liver and pancreas, and to determine a copious flow of the important secretion of these glands into the duodenum, after which the fluid swallowed dilutes, and aids in carrying them forward into the other intestines.

Wichmann and Stieglitz recommend its exhibition in scarlatina. The latter gives it largely diluted with water, to which a little oxymel is added, in doses adequate to procure three or four motions a day. I have found it an efficient remedy in erysipelas, quinsy, and catarrhal ophthalmia, given in small quantities every three or four hours, combined with tartar emetic, which quickens its operation.

Dose and form of exhibition. Sulphate of magnesia may be ordered for children of two or three years old, in the dose of 1 or 2 drachms dissolved in water, sweetened with sugar, and flavoured with lemon-peel, one of the best correctives of its Infusion of roses acidulated with sulphuric nauseous taste. acid, is a still more elegant vehicle. The addition of the acid is said to prevent its impairing the tone of the stomach. above dose ought to be repeated every third or fourth hour, until adequate purgation ensue. Infusion of senna, manna, and magnesia are not unfrequent adjuncts, the last renders its taste less disagreeable. Half a drachm may be added to cinchona draughts, when there is a disposition to feverishness or constipation.

261.

R Infus. Ros. Co., 3vss. Magnes. Sulph., 3vj. Syrup. Limon., 3ss. M. Sit mistura.

S. One or two tablespoonfuls every three hours.

262.

R Magnes. Sulph., 3ij.
Mannæ. 3j.
Solve in
Emuls. Amygdal., 3iv.
M. Sit mistura.

S. A dessert-spoonful every two hours, for an infant between one and two years old. Wendt. MANGANESII BINOXYDUM. The levigated peroxide of manganese, made into an ointment with lard, has been employed, according to Dr. Burns, in tinea capitis.

MANNA. Manna is the concrete juice of the Fraxinus ornus. The best flake manna contains about 60 in the 100 of a peculiar saccharine principle, sugar of manna or mannite. It is mawkish, sweet to the taste, and slightly laxative to the bowels. It is farther said to loosen expectoration, and promote the urinary discharge. Its use is indicated in catarrhal affections of the bronchial membrane, in irritation of the uropoietic apparatus; and generally, wherever a demulcent combined with an aperient medication is required.

Manna may be ordered with impunity to the youngest infant. "If the meconium do not come freely away," says Dr. Burns, "and the child have no stool in twelve or sixteen hours, or seems to be oppressed or troubled with pain, a little manna may be given with much advantage." (Principles of Midwifery, p. 603.) To ensure its opening effect it ought, generally speaking, to be united with some other mild laxative, as magnesia. The magnesian combination is a valuable medi-

cine in aphtha.

Dose and form of exhibition. Manna may be given in the dose of 1, 2, or 3 drachms in warm milk, and repeated every two or three hours until it produce the wished for effect. Or, to lessen its liability to cause flatulence and griping, it may be taken along with some aromatic water or oleo-saccharum. Thus, of a solution of a drachm or a drachm and a half, in 4 or 6 ounces of fennel-water, a teaspoonful may be exhibited to a new-born child every half-hour; but for infants between one and two years of age, one part may be dissolved in four parts of fennel-water, and given to the extent of two tablespoonfuls every half-hour. For children above two years it ought always to be prescribed as an adjunct to some more active aperient, as infusion of senna, tartrate of potash, rhubarb, or to castor oil, with which it may be combined by the medium of mucilage.

R Mannæ, 3j.
Aq. Fæniculi, 3iij.
Cola et adde
Sp. Ammon. Arom., 9j.
M. Sit. mistura.

S. A tablespoonful every hour in infantile catarrh.

Rosenstein.

264.

R Mannæ, 3ij. Aq. Carui, 3j. M. Sit mistura.

S. For an infant a spoonful every hour until the bowels are opened.

265.

R Infus. Sennæ, Co., Ziv. Aq. Carui, Zij. Potassæ tart., Zij. Mannæ, Zj. M. Fiat mistura.

S. A tablespoonful every second or third hour until it operates.—Evanson and Maunsell.

266.

R Infus. Sennæ, Co., Zij.
Aq. Menthæ, Zss.
Mannæ, 3ij.
Magnesiæ, 9j.
Tinct. Rhei, 3j.
Syrup. Rosæ, 3ij.
M. Fiat Mistura.

S. One to two drachms every third hour. — Evanson and Maunsell.

267.

R Mannæ, Ziss.
Potass. bitartratis, Zss.
Syrupi Rosæ, q.s.
Ut fiat electuarium.

S. A teaspoonful to be taken every hour till it answer.

268.

R Mannæ, 3ss.
Magnes. carb., 5j.
Potass. nitr. 3ss.
Ext. Hyoscyami, gr. ij.
Aq. Fæniculi, 3ij.
Syrup. Althææ, 3ss.
M. Fiat mistura.

S. Two teaspoonfuls every hour for a nine months old child labouring under the convulsions of teething.

Huleland.

R Mannæ, 3vj. Tinct. Rhei, 3iv. Magnesiæ carb. Potass. tart. āā, 3j. Aq. Fœniculi, 3j. Oxymel. Scillæ, 3ij. Syrup. Althææ, 3ss. M. Sit mistura.

S. A dessert-spoonful every second hour in catarrhal fever, spasms, &c .- Hufeland.

270.

R Mannæ, 3ss. Solve in Infus. Sennæ, (ex. 3j. parat.) Zij. Sodæ Sulphatis, 3ss. M. Sit mistura.

S. Two spoonfuls every hour. Radius.

271.

R Sodæ tart., 3vj. Mannæ, 3j. Solve in Aq. Fæniculi, Ziv. Colatur, adde Syrup. Rhei, Zvi. M. Sit mistora.

S. A tablespoonful every two hours .- Vogt.

272.

R Dec. althaæ, 3iv. Mannæ. Magnesiæ Sulph. āā, 3iv.

M. Sit mistura. S. A tablespoonful every hour

when the bowels are irritable. Radius.

MARANTA ARUNDINACEA. See AMYLUM.

Mastic is the resin obtained from the MASTICHE. Pistacia lentiscus Mastic-water (μαςτιχονερου) is recommended by the physicians of Albania, as a remedy in infantile diarrhœa. It is simply water which has been boiled along with mastic. (Medicin. Almanach, für 1838, p. 155.)

Honey, is the sweet substance obtained by the bee from the nectaries of flowers, and deposited in hexagonal cells Although of animal origin, it consists wholly of vegetable matter; namely, sugar of grapes, sugar of gum, To some acrid mannite, mucilage, extractive, and wax.

principle it owes its laxative and griping properties. It is principally employed for forming several officinal preparations. From its stimulus it affords an excellent gargle, and facilitates the expectoration of viscid phlegm, and is sometimes employed as an emollient application to abscesses, and as a detergent to ulcers. In scarlatina, when the fauces are covered with masses of lymph or small ash-coloured sloughs, an excellent gargle is a mixture of 5 ounces of infusion of roses, an ounce of honey, and a drachm of tincture of capsicum.

MEL BORACIS. Honey of borax, is much employed as a detergent in aphthæ and ulcers of the mouth.

For the manner of using it, see Borax.

MEL ROSÆ. Honey of roses, is a mild cooling detergent, particularly useful in ulcerations and inflammation of the mouth and tonsils, and as an adjunct to astringent gargles.

273.

R Mellis Rosæ, 3ss. Mucilag. Sem. Cydon., 3j. M. Sit linctus.

S. To be applied to inflamed fauces, by means of a bit of soft sponge.—Gölis.

MENTHA. Mint, the three officinal species of the genus mentha, peppermint, pennyroyal, and spearmint, so closely resemble one another in therapeutic properties that they may be indiscriminately used. They are carminative and antispasmodic. Mint water (Aqua Menthæ) is frequently prescribed to allay irritability of the stomach; but in such cases the simple or compound infusion of mint, or fresh mint tea, is preferable.

R Infus. Menthæ, 3j. Mist. Acaciæ, 3ss. Liq. Potassæ, gtt. vj. Syrup. Aurantii, 3ss. Sp. Lavand. Co., 3ss.

Tinet. Opii, gtt. ij. M. Sit mistura.

S. One to two drachms every second hour. Evanson and Maunsell. MEZEREUM. The bark of the root of mezereon (Daphne mezereum) has been for many years employed in France for maintaining the discharge from issues. As an epispastic it has been held in estimation from time immemorial, in some parts of the continent. Hufeland recommended its use in children prone to hydrocephalus. It seems to excite the whole cutaneous surface, and produces at times general metastatic eruptions, which prove salutary on the principle of counter-irritation. If there be much irritability of the skin, or local tenderness, its employment is inadmissible; and ordinary issues must be

adopted instead.

Mode of application. The point of insertion of the deltoid muscle of the shoulder is commonly selected for the site of suppuration. Should a more general effect be desired, the application may be repeated on some other part or parts, so soon as the first begins to secrete pus. A small portion of the inner bark, from an inch to an inch and a half long, and from eight to twelve lines broad, previously soaked for a few hours in vinegar, being placed with its flat surface on the skin washed beforehand with vinegar, is to be covered with a piece of oil-silk, over which a compress and bandage may be applied. After ten or twelve hours contact violent itching ensues. This same process is to be repeated morning and evening with a fresh portion of mezereon, until a pustular eruption be developed; whereupon the epidermis is gradually destroyed, and a superficial suppurating sore or ulcer formed. This involves the cuticle only, and does not occasion deep ulceration or positive wound, however considerable the discharge. The sore thus established may be dressed once in the day with digestive ointment, unless it be of an irritable nature, when any bland salve, cold cream, or a bit of soft cabbageleaf may be substituted. Sometimes small phlegmons surround the ulcer in question, and induce considerable itching; inconvenience easily remedied by the application of a pledget of cold water over the part. The virulence of the action of mezereon, may, it is said, be counteracted by camphor.

MOSCHUS. Musk, is esteemed a powerful excitant and antispasmodic. Being less diffusible in its nature than ether and ammonia, its medicinal effect is on that account more abiding. It has been reckoned a valuable antispasmodic for

children, inasmuch as it is less apt to heat, or produce undue vascular excitement than other congenerous remedies. Indeed, its operation seems to be more specially directed to the nervous system. And its virtues of allaying spasm are so intimately connected with its innervating qualities, that it acts with certainty only while there is a deficiency of vital energy. (Richter Arzneimittellehre.)

It is extensively employed on the continent in the following

ailments incidental to infancy and childhood:

1. In the advanced stages of adynamic and ataxic fevers, and acute exanthemata, when, from exhaustion of the nervous system, the restorative process is suspended, and fatal sinking or dangerous metastases to important organs impend. Here, no time ought to be lost in resorting to its exhibition; giving it in full doses, and enhancing its agency by other appropriate

remedies, as ammonia, camphor, and warm baths.

2. In phlegmasiæ, when there exists a high degree of enervation, inducing convulsions, or complicated with them. Hence, in two of the most deadly scourges of infancy, acute hydrocephalus and croup, its use is indicated; but under circumstances, whose discrimination requires the utmost tact on the part of the medical attendant: both of these diseases are in their nature and origin essentially inflammatory: both demand a strictly antiphlogistic treatment, by which alone can a cure be accomplished. Should they therefore be ushered in by convulsions. no infrequent occurrence, such a phenomenon by no means calls for the administration of antispasmodics, but rather an opposite medication, one appropriate to arrest the phlegmasia, of which they are but the outward visible sign. ever, in the hydrocephalic affection, after the leading indications have been fulfilled, stupor persists, sensibility being oppressed, and spasms betoken profound cerebral disturbance, (Wendt;) or if in croup, after inflammation has been subdued, and the exuded coagulable lymph evacuated, convulsions continue or become developed, causing dyspnæa and asphyxia; then is the cautious exhibition of antispasmodics, and above all musk, equally appropriate and efficacious. Experience uniformly proves that, in infancy, the transition from a state of active inflammation to one of vital exhaustion is often most sudden. especially where energetic depletion has been pursued. Whence musk constitutes a remedy the more valuable, inasmuch as it tends to counteract the pernicious after-consequences of that loss

of blood, which the urgency of symptoms at the beginning of the attack rendered indispensable. Under such circumstances it may be combined with calomel or antimonials; partly to check any latent inflammation, and partly, in the instance of croup, to promote expectoration. Some physicians, observes Frankel, from whom we have borrowed the foregoing details, have ordered musk in the early stage of croup, and with the best results, even without any abstraction of blood. Thus Wigand gave, according to the age and constitution of the little patient, from 2 to 5 grains of calomel with half a grain or a grain of musk every hour, until distinct vomiting of mucus succeeded the rattling in the throat and trickling from the mouth. It appears however, that many of the cases adduced were not really croup; and other experienced practitioners, having tried it, deprecate this method as fallacious, recommending in every instance of well marked sthenic croup, occurring in a plethoric habit, copious withdrawal of blood. Yet, in cases where the child is of a weakly and relaxed constitution, says Sachse, where a simple mercurial medication will suffice; and where the prevailing spasmodic symptoms require to be allayed, then the above combination of musk and calomel may be profitably exhibited.

In a treatise, just published by Dr. Seifert of Greifswald, on the Bronchiopneumonia of infants, the remedial efficacy of musk in that complaint is particularly insisted on. After the system has been reduced by abstraction of blood, should considerable general feebleness be present, as denoted by remarkable pallor and diminished temperature of the surface, progressive collapse and sunken features, and accompanied with more or less manifest decline of the fever, the exhibition of musk ought to be commenced and steadily persevered in until convalescence be established. He prescribes it in the dose of 1 or 2 grains to infants a few weeks old; and continues it every hour or two hours, sometimes for ten or fourteen days. He gives it by itself, in linctus, and promotes its operation by warm baths.

Horn says, "I have employed this substance (musk) particularly in the pneumonic affections of children very frequently, and almost uniformly with signal benefit." And elsewhere, "I believe that I do not speak extravagantly, when I attribute the cure of numerous cases of pneumonic disease in children to the early and liberal employment of musk." (Die Erkentniss und Heilung der Pneumonie, Frankfurt. 1802.)

Frank speaks of it in the following emphatic terms. sertim in bronchitide typhode miracula vidi (sc. ex. moscho.)" Vid. Praxeos Medicæ universæ præcepta, partis ii. vol. ii. sect i. pag. 400, nota 28.

In convulsive diseases. The more these are characterized by debility the more efficiently will musk act. Wichmann terms it a specific in what is called spasmodic croup. Its vigorous and early employment will alone arrest the fatal paralysis of the respiratory organs, consequent upon exhaustion of the nervous Schnuhr (Rust, Magazin, Bd. 25) gave it with signal benefit in the above disease, in the dose of 2 grains with 1 grain of castor every second hour, together with assafætida enemata. Hinze praises the mixture with oxysulphuret of antimony and oxide of zinc, as no less serviceable.

In spasmodic affections, affecting the air passages, musk may be prescribed to children between the ages of two and four in the dose of 2-6 grains every two hours; and may be united with other diffusible stimulants and antispasmodics, as ammonia, camphor, assafætida, valerian, &c. Baths, and frictions over the surface of the body, especially the spine, are important adjuvants. In hooping-cough musk is of utility, when after subsidence of the acute symptoms, there remains diminished sensibility of the organism, manifested by convulsive twitchings with disposition to fainting. Here Hufeland extols it after previous emetics. He has witnessed urticaria follow its use.

In the convulsive fits of children, especially if depending on sympathetic irritation of the spinal and ganglionic nerves, it is an important remedial agent. Wendt says of it; influencing directly the sensitive functions, without augmenting to any notable extent the force or quickness of the vascular system, musk must always exercise a favorable action in spasmodic ailments, whenever the sensibility is at fault. A febrile condition and marks of undue determination of blood to the brain are special contra-indications to its use. Are these absent, then may it be fearlessly given to the most tender infant.

In epilepsy, when it assumes a periodical character and is apparently connected with some disorder of the nervous system, independently of organic disease, musk, assiduously administered in considerable doses, has been known to postpone the fits.

Dose and form of exhibition. Musk may be prescribed to

infants a few months old in the dose of from half a grain to 2 grains every hour, and to children more advanced, in that of 2 or 3 grains. An excessive dose is apt to produce squeamishness and heat at the stomach. Nervous fevers, retrocession of exanthemata, croup, spasm of the glottis, epilepsy, require large doses, and combinations with some other similar remedies.

According to Dr. Paris, the best form for its administration is that of bolus, combined with ammonia or camphor. It may also be administered in powder triturated with sugar, which facilitates its minute division; or in a mixture, with five times its weight of mucilage. The dose of the *Mistura moschi* is a

spoonful every two or three hours.

Artificial musk. If one part of oil of amber be gradually mixed with three or four parts of strong nitric acid, an orange colored resinous substance is obtained, exhaling a strong odour of musk. This has been given with benefit in the dose of a few grains, twice or thrice a day, in hooping-cough.

275.

R Moschi, gr. iij.

Pulv. Opii, gr. ss.

Pulv. Acaciæ, 9j.

Sacchari albi, 3ij.

Terend. m. f. pulv. divid.

in vj. partes æquales.

S. A powder every second hour in hooping-cough without fever.—Gölis.

276.

R Moschi, gr. viij.
 Calomelan., gr. viij.—xvj.
 Sacchari albi, 3ij.
 M. terend. f. pulv. divid.
 in viij. partes æquales.

S. A powder every second hour.—Fränkel.

277.

R Moschi, gr. ix.
Antim. Oxysulph.
Zinci Oxydi, āā, gr. iij.
Sacchari albi, 3ss.
M. f. pulvis divid. in pulv.
vj. æquales.

S. A powder every second hour in hooping-cough.

Hinze.

278.

R Moschi, gr. vj.
Sacchar. albi, 3iij.
Misce terendo invicem,
adde
Aq. Fæniculi, 3iij.
Mist. Acaciæ, 3ij. M.

S. A tablespoonful every two hours to a child of two or three years old.—Wendt.

R Moschi, gr. vj.
Ammon. sesquicarb.,
gr. iv.
Sacchari albi, 5iij.
Misce terendo et adde
Aq. for. sambuci, z̃iss.
M. Sit mistura.

S. A teaspoonful every hour in infantile fits.—Wendt.

281.

R Moschi, Əj.
Pulv. Acaciæ, 3ij.
Tere cum Aq. Cinnam.,
3j.
Syrup. Althææ, 3iij.
M. Sit mistura.

S. A spoonful every hour.

280.

R Moschi, gr. iij.—iv.
Tere exactiss. cum.
Aq. Anethi, 5vj. adde
Sp. Ammon Fætid., 9j.
Syrup. Rhæados, 3j.
M. Sit mistura.

S. A teaspoonful every hour for a six months old child.

282.

R Moschi, gr. vj.
Mist. Acaciæ, ℥ss.
Syrup. Mori. 3j.
Aq. Anethi, āā, 3iij. M.

S. A teaspoonful every hour or two.

MUCUNA PRURIENS. See Dolichos.

MYRRHA. Myrrh, the gum resin of the balsamo dendron myrrha, is a stimulant, tonic, and expectorant. It has been much extolled as a medicine in consumption; but only in the latter stages of that intractable disease can it prove at all useful. When the patient is in a state of atony, and all traces of inflammatory excitement have long vanished, when the aspect is leucophlegmatic and wan, myrrh affords temporary relief by stemming in some degree that colliquative exhaustion which always accompanies profuse purulent expectoration. Of course its tonic powers can only be taken advantage of where stimulants are admissible: hence, it ought never to be ordered to very young children. It has been administered with benefit in protracted hooping-cough also; and in ague before enduring the cold fit.

Dose and form of exhibition. No form is so eligible as that of substance. It may be given in the dose of a few grains to children of six or eight years old in powder or mixture.

R Myrrhæ, gr. xij. Conch. ppt., 3ss. Sacchari albi, 3iss. M. ft. pulv. divid. in xij. partes æquales. S. One every three hours .- Wendt.

NUX VOMICA. The seeds of the strychnos nux vomica, contain a virulent poisonous principle, strychnia, which exercises a specific influence over the motor nerves of the medulla spinalis. Strychnia has been sometimes applied with advantage, according to the endermic method, in paralysis of the lower extremities, independent of cerebral disorder, occurring in children about six or eight years of age; over a blistered surface in the neighbourhood of the sacrum or lumbar vertebræ; ath of a grain of strychnia may be sprinkled, night and morning, cautiously increasing the dose to a grain or grain and a half, carefully watching its effects, and intermitting it so soon as any tetanoid symptoms supervene.

The extract of nux vomica is strongly recommended by certain German physicians in a variety of chronic symptomatic diarrhea, not depending on morbid accumulations, but on simple relaxation of the bowels, and attended with extreme weakness, nervous irritability, and violent colic pains. Here the nux vomica is preferable to opium, since it is ascertained, from experience in children, that its operation being chiefly directed to the spinal marrow and its nerves, it does not disturb the sensorium like that drug. Schwartz considers extract of nux vomica to be a specific remedy against prolapsus of the rectum in children. It has been sometimes given with advantage in epilepsy, and in incontinence of urine, (Heidelberger Medicinische Annalen, Bd. i. H. i. 1835); conjoined with frictions made with an alcoholic tincture of the seeds.

The extract may be ordered in the proportion of 1 grain to 4 ounces of mucilaginous emulsion; of which mixture a teaspoonful may be given every two hours to children from one to three years old; for older children the proportion of extract may be doubled. In diarrhea calumba is an excellent adjunct.

R Extract. Nucis Vom., gr. j.—ij.
Mist. Acaciæ, 3ss.
Aq. destillat., 3iij.
Confect. Amygdal., 3vj.
M. fiat Emulsio.

S. A teaspoonful every second hour.—Fränkel.

285.

R Extract. Nucis Vom., gr. j.—ij. Aq. destillat., 3ij. M.

S. To infants from 2 to 3 drops, to older children from 12 to 15 drops every four hours.—Schwartz.

OLEA DESTILLATA. The volatile oils are secreted by vegetables, and constitute the active principle of all diffusible aromatics. They act as powerful stimulants; they expel flatulence, and correct the nauseous taste and griping properties of other medicines.

In children they are chiefly employed as "carminatives," to remove flatulence from the stomach and intestines. And Dr. Dunglisson observes, they afford us a good example of excitants producing their effect simply on the parts with which they come into immediate contact. When flatus accumulates to any great extent in the alimentary canal, the muscular fibres become so far distended that exhaustion is produced and they are incapable of acting with sufficient energy to expel the flatus, or to diffuse it through the tube; hence the pain which accompanies such over distension in flatulent colic. But if, in this case, an aromatic or carminative be administered, the excitement it produces in the mucous membrane, with which it comes in contact, is extended by contiguous sympathy to the muscular coat, which is aroused to greater contraction, and, in this way, the flatus is diffused; a part may escape through the cardiac orifice of the stomach, if that organ has been the seat of the affection, or it may descend into the lower intestines. (General Therapeutics, p. 93.)

In consequence of their excitant properties they ought not to be exhibited during the existence of morbidly increased vascular

action.

Dose and form of exhibition. The volatile oils may be administered internally in the dose of half a drop or a drop, according to the age of the child and the exigencies of the case, triturated with sugar, in the proportion of a scruple to a drop

of the oil. By this combination, termed an oleo-saccharum, the purest part of the oil is rendered soluble in water. When the taste is hot and pungent the oil may be mixed along with some absorbent antacid, as magnesia, or some antispasmodic tincture. Such a union is exemplified in Dalby's carminative, which Dr. Paris pronounces to be "constructed on philosophical principles."

Externally, volatile oils are employed as an adjunct to liniments for embrocation. The cutaneous surface participates more or less in most affections of the organs of respiration and digestion; and, under such circumstances, their outward application will be found often more serviceable than their internal use. This has moreover the important advantage of not producing heating effects or unduly quickening the circulation.

The oils of dill, anise, peppermint, carraway, and lavender, are those most commonly employed as carminatives for relieving flatulence and colic. The oil of camomile has been recommended by Löbenstein-Löbel as useful in the second stage of hooping-cough. He prescribes it in the dose of $\frac{1}{12}$ th of a drop, conjoined with mucilage, syrup, and orange-flower water.

Cajuput oil is a powerful excitant; when swallowed it produces a general glow, fills the pulse, and stimulates the nervous system. Wichman recommended its exhibition in spasmodic croup, as a substitute for musk. It is inferior, however, to that remedy in relieving spasm, and is moreover of too heating a nature for infants. Diluted with four parts of olive oil it forms, according to Dr. A. T. Thomson, a valuable embrocation: it has thus been found serviceable as an anthelmintic. Acrel says that a drop poured on linen, and laid on the pit of the stomach, allays infantile convulsions.

286.

R Ol. Cajuputi, gtt. vj.
Sacch. albi, q. s.
Aq. Fæniculi, ʒij.
Tinct. Castorei, Эj.
Syrup. Aurantii, ʒss.
M. Sit mistura.

S. A teaspoonful every two hours in spasmodic croup.—Fränkel.

Decided advantage has been produced in several cases of varied inflammation of the eye, by dropping the essential oil of lemons upon the inflamed surface. (Baltimore Medical and Surgical Journal, vol. i. p. 478.)

Oil of *nutmeg* is a favourite remedy with the German physicians. They employ it diluted, in the form of external friction

in dyspepsia, diarrhœa, spasms, &c.

In the syncope of new-born infants, Meude recommended their being placed along with the navel-string in a hot bath, to which 6 drops of oil of rosemary are to be added.

OLEUM TEREBINTHINÆ. See TEREBINTHINA.

OLIVÆ OLEUM. Olive oil, when taken internally, lubricates the parts with which it comes in contact; and by increasing the peristaltic motion of the intestines, induces a laxative effect. Its use is indicated in inflammatory affections of the bowels, in irritation depending on acrimonious secretions or ingesta, in spasms thence resulting, in strangury, and as an anthelmintic, since it not only promotes the dislodgment and evacuation of worms, but also tends to allay the uneasy symptoms to which they give rise.

Dose and form of exhibition. Olive oil may be given either pure or made into an emulsion with yolk of egg or mucilage, in the dose of a spoonful. It may be combined, according to circumstances, with various laxative or antispas-

modic remedies.

As an embrocation olive oil is peculiarly adapted for the delicate skin of children, as it may be used without causing inflammation or excoriation. Dähne recommended frictions with it as a prophylactic against scarlatina. Wendt treated successfully habitual constipation occurring in young children, and which had resisted oft repeated purgatives, by means of regulated diet and rubbing the belly with warm olive oil two or three times a day.

In chronic affections of the skin it exerts a favorable action, affording a protection against external influences, and by its emollient properties diminishing preternatural sensibility. When the crusts in porrigo become hard and dry, or when they occasion sense of heat, nothing soothes more than oleaginous

inunction.

Olive oil is advantageously administered as an adjunct to enemata, when there is accumulation of indurated fæces, or the lower intestines are in a state of morbid irritability. In the febrile states, spasms and colics determined by worms, such enemata are most beneficial by assisting the operation of other anthelmintics. One or 2 tablespoonfuls of oil, with a little gruel, will serve for an enema. The effect will be enhanced by substituting the camphorated (Linimentum camphoræ) for the simple oil, whether as embrocation or enema.

287.

R Ol. Olivæ, \(\frac{7}{3} \) ss.

Mellis q. s. ad. subactionem.

Syrup. Rosæ, \(\frac{7}{3} \) ss.

M. Sit mistura.

S. One to two teaspoonfuls, as an aperient for infants.

288.

R Ol. Olivæ.
Vitell. Ovi, ãā, 3iij.
Syrup. Althææ, 3iss.
M. Sit linctus.

S. A teaspoonful occasionally in sore throat.

289.

R Ol. Olivæ, 3ss.
Pulv. Acaciæ, q. s. ut fiat
cum Aq. Fæniculi, 3iij.
Emulsio cui adde
Mannæ, 3j.
Syrupi, 3ss.
M. Sit mistura.

S. A dessert-spoonful every hour.

OPIUM. Opium is the inspissated juice of the unripe capsules of the papaver somniferum. Its primary operation is that of an excitant, but this is speedily followed by narcotic and sedative effects. In an overdose it acts as a poison, producing coma, convulsions, and death. According to Müller's recent researches it must enter the circulation, and the blood becomes impregnated with it before it can influence the nervous system. The blood thus poisoned narcotizes the brain and spinal marrow, and these exercising a reflex influence over the nerves, occasion convulsions. It is, however, on the sensorium,

and on the nerves proceeding from the brain, that opium exerts its more specific effect. From the experiments of Flourens, it would indeed appear that the cerebral hemispheres are directly under its influence; since he ascertained that in animals poisoned by it sanguinolent extravasation always occurred in that situation, the brain appearing elsewhere natural.

Opposite opinions have been promulgated touching the propriety of administering opiates to tender infants. Thus, many experienced practitioners have entered their protest against giving the drug, even in the most minute doses, under any circumstances whatever, while others, as Gölis, fully conversant with infantile maladies, prescibes it at every age

and in the most varied forms of disease.

During the first months of existence, the susceptibility to the influence of narcotics, particularly the preparations of opium, and their effects, primarily in increasing vascular action in the brain, and secondarily in favouring congestion in the same organ, according to the dose, have appeared to Dr. Copland so important, that he has scarcely ever ventured on the exhibition of these medicines, excepting under peculiar circumstances.

(Dictionary of Practical Medicine, art. Age.)

Dr. Christison says, "it appears that very young children are often peculiarly sensible to the poisonous action of opium, so that it is scarcely possible to use the most insignificant doses with safety." Sundeling states in general terms that extremely small doses are very dangerous to infants on account of the rapidity of absorption. This opinion, which I have heard stated by various practitioners, is amply supported by several cases. In one, "the administration of 3 drops of laudanum in a chalk mixture for diarrhæa to a stout child fourteen months old, was followed by coma, convulsions, and death in about six hours." In another, "an infant, a week old, died with all the symptoms of poisoning, after receiving 4 drops of laudanum."

The following graphic description of the poisoning of opium is given in the "Letters to a Mother." "The morbid effects of opiates or anodynes are seen as the consequence of a single dose or of the habit of giving these medicines. Infants are very susceptible to the effects of the first dose of an opiate. Dosing, and then perhaps convulsions, takes place; the infant lies with the eyes partially closed and turned upwards; the breathing is laborious and sighing; there is some tossing about of the arms

perhaps; and the powers of life begin to sink."

The appearances which arise from the habit of giving opiates are very peculiar. They may be seen in the dwindled, pallid, sallow, stupefied countenances of the infants of the poor as you pass them in the street. The eyelids are red and swollen; the whole face is the miniature of a sickly aged person.

"Not dissimilar appearances take place from giving spirits." The late Dr. Clarke, in his Commentaries, speaking of the practice of administering opiates to children, cautions his reader, not only on account of the uncertain and sometimes hazardous effects of the drug, but because it draws a veil between the physician and the disease'; by which means the early stages of pressure on the brain are sometimes concealed, and the symptoms of a dangerous disorder mistaken for the

mere effects of opium.

No farther evidence need be adduced to prove the danger with which the administration of opiates to infants is fraught. Hence, the indiscriminate exhibition of empirical mixtures, for the accurate composition of which no person can be made responsible, cannot be too strongly reprobated. The physician last named has mentioned a case he witnessed, where "40 drops of Dalby's carminative destroyed an infant." similar ones, of the fatal effects of Godfrey's cordial, are recorded in the notes appended to Dr. Merriman's edition of Underwood.

To diminish morbid susceptibility, mitigate pain, procure sleep, allay inordinate action, and to check exhausting diarrhea, opiates are sometimes indispensable. Hence, we are not, as Mr. North judiciously observes, to deprive ourselves of a powerful weapon, because, in the hands of the unskilful, it may have proved the means of destruction rather than of defence. manage the use of opium or other medicines of the same class adroitly, either in adults or children, when it is our object to subdue nervous irritability, is by no means an easy task. effects of these remedies depend greatly upon the state of the constitution when they are exhibited, and upon the dose in which they are given. If there be any local disturbance or disease upon which the general irritability and restlessness of the patient depend, we should endeavour to remove the local affection by proper means, before we venture to exhibit sedatives. (Op. cit.) Their use is of course contra-indicated by plethora, by a highly inflammatory state of the system, and

by undue determination of blood to the brain or other vital

organ.

In inflammatory affections of the serous membranes, after depletion, opiates exert a remarkable effect in producing rest and tranquillity. Most beneficial results have thus been derived in diseases of the meningeal and peritoneal membranes. "In hydrocephalus," observe Drs. Evanson and Maunsell, "opium employed after bloodletting and purging, alone or in combination with antimony or ipecacuanha (as Dover's powder.) is often of great service, particularly in the second or even third stage of the disorder, by lessening the frequency of the convulsions, all aying pain, and even rendering the pulse more full, and less irregular. The use of opium, when once commenced, should not be suddenly discontinued; but when contraction of the pupil ensues from its employment, this is to be looked on as a sign that the use of the medicine has been carried far enough." (Op. cit., p. 526.) In the latter stages of certain cases of cephalic irritation, sometimes mistaken for hydrocephalus acutus, the cautious administration of opium combined with an ammoniacal salt, will often save the patient, provided his strength be at the same time sustained by light nutritious diet. (Med. Chir. Rev., Jan. 1838.) restlessness is present, in hydrencephaloid disease, small doses of opium with carbonate of ammonia also are indicated.

In all cases of gastric or intestinal irritation, whether sympathetic or not, opium is a chief resource; and must, in severe cases, be administered in a decisive manner. observes, that opium is invaluable in protracted debilitating diarrhea, when the evacuations are watery, slimy, without smell or colour, and the disease the result of an unwholesome and ill regulated diet, of sudden weaning at an early period, or of long sustained irritation from teething. Such a diarrhœa ultimately deprives the child of all rest, warmth, and energy, and the intestines of their natural mucous secretion; induces in the bowels a high degree of morbid irritability; and may terminate fatally through inanition, convulsions, or ulceration. He narrates an instance in which a child of three months old was saved only by the timely administration of laudanum. is to be observed in such cases, that the opiate is less likely to compromise the life of the child than the irritant and exhausting effects of the disorder. Under similar circumstances Eberle advises a powder composed of the 20th of a grain of opium,

the 8th of a grain of sulphate of iron, and 5 or 6 grains of powdered gum arabic, to be given three or four times daily, according to the age of the child. In the aggravated forms of diarrhea, supervening on scarlatina, Wendt recommends, in like manner, the cautious exhibition of opium, but only in children above two years. In such cases, an injection containing 1 or 2 drops of laudanum, according as the child is six or twelve months old, will be found a most efficient remedy.

In severe dysentery, nothing relieves sooner the abdominal spasms, pain in the lower intestines, and the tenesmus, than a small enema of starch or infusion of linseed, with 1 or 2 drops of laudanum. Occasionally here, the sphincter muscle of the anus is spasmodically closed, so as to preclude the administration of the remedy. Hot fomentations, exposing the part to the vapour of water, and gently rubbing them after by means of the hand, smeared with oil, will usually overcome this obstacle.

In infantile cholera, attended with violent and continued vomiting, an opiate may be required every hour or every halfhour, until the desired result be obtained, but its action must be strictly watched. Should there be any traces of inflammation in the stomach or bowels, these must be combated while opium is being administered.

In the ordinary forms of diabetes in infants, mild laxatives, in alternation with Dover's powder, will often procure relief.

The irritable or spasmodic character which often accompanies the cough or respiration in the pulmonary affections of children, is generally mitigated, and at times removed, by the use of an opiate; in hooping-cough, Henke extols its utility; inasmuch as he obtained from its employment signal advantage, where other means had failed, and in the case of the most delicate children never experienced any ill effects. He ordered it in oft repeated but minute doses, apportioned to the age and excitability of the individual; and diminished or suspended its employment so soon as the intensity of the cough was removed, the point at which tonics are indicated. Dr. Willan says that he found the watery infusion of opium more useful than any other narcotic in hooping-cough. But, as Frankel observes, notwithstanding everything has been tried that art could devise, we do not yet know of any remedy calculated to curtail essentially its course; and the conclusion of Sydenham, of Werlhoff, and of Hufeland, that hooping-cough can-

not be cured within a month, stands uncontroverted. Medical skill has achieved its utmost when it has succeeded in averting the slowly or rapidly mortal sequelæ of the disease. Hence, opium ought only to be resorted to for the mitigation of urgent symptoms: when the cough is so severe that it is of vital importance to quiet irritation, and thus ensure the child sleep

and repose.

In the exanthemata, particularly in small-pox, opium is most decidedly indicated, when convulsions, from irritation, occur; or when the eruptive fever is accompanied with much restlessness. At a more advanced stage of the suppuration, when the pustules do not become fully developed, but remain of a greyish or blueish tinge and filled with discoloured lymph; and when the depressed condition of the circulation and the cutaneous function announce the approach of gangrene, then is the utility of opium, as a diffusible stimulant, conjoined with bark and wine, sanctioned by high authority.

In the advanced stages of remittent fevers, for the purpose of allaying irritation and procuring sleep; and in continued fever, when there are watchfulness, diarrhæa, and subsultus tendinum, or low muttering delirium, opium may be given advantageously in the form of Dover's powder. If there be much debility present, it should be conjoined with wine.

In intermittent fevers the best period for administering it is that recommended by Sydenham—an hour before the expected paroxysm: it weakens the force of the attack, and sometimes suspends it altogether. Hufeland ordered opium when the intermittent fever was very intractable, and caused by nervous irritation; or when the fever persisted after the exciting cause was removed, as a mere nervous affection. In such cases, where quinine and sal-ammoniac were unavailing, he succeeded in curing children, from three to five years of age, by exhibiting about 8 grains of Dover's powder, shortly before the expected fit.

In the trismus nascentium, or, so called "nine day fits," Ith of a drop of laudanum is to be given every second hour, until its narcotic effects are appreciable, together with a grain and a half of calomel, every fifth or sixth hour, up to the third time; afterwards not more frequently than twice or three times in twenty-four hours, with intermediate doses of castor-oil, in the quantity of a large sized teaspoonful, sometimes joined with a

third part of spirits of turpentine, as recommended by Dr.

Breen of Dublin. (Evanson and Maunsell, Op. cit.)

In alarming convulsions, when there are no marks of vascular excitement, but great irritation of the nervous system and pain, opiates may be given in combination with oil of anise, or assafætida, or with both, after the bowels have been freely opened. If we have reason to believe that convulsions arise in children from the improper and habitual use of opiates, we must discontinue the use of them gradually. A child, no more than an adult, will bear with impunity to be deprived at once of this hazardous and artificial stimulus. "In several instances," observes Mr. North, "when it has been discovered that the nurse or mother had been in the habit of giving narcotics, I have seen the child pass rapidly into a state of great irritability and danger, with convulsive movements of the limbs, &c., in consequence of the want of judgment of the practitioner, who has peremptorily insisted upon the immediate and total abandonment of their use. It may be proper to give such directions to those who have the care of the child, while we ourselves prescribe a similar medicine in gradually diminished doses." (Op. cit.)

The abnormal and involuntary contractions of the muscles produced by disordered conditions of the nervous or vascular system, called spasms, may originate in one or other of the following ways: in compression of the substance of the brain from congested vessels or from effused fluid; or in immediate exhaustion of the central nervous organ, determining unequal distribution of nervous energy. Now the first assigned cause, sanguineous congestion with resulting compression, is the more frequent in children, inasmuch as vascular action in the brain is at that period of life prominently developed, being engaged in perfecting its organization. Were opium given under such a condition, apoplectic stupor would, in all likelihood, be the direct and instantaneous result of the administration of the drug. Again, infantile spasms are often connected with disordered or overloaded states of the stomach and bowels, for which an emetic and laxative, with an enema, surely not an opiate, constitute the appropriate medication.

The employment of opium, as an antispasmodic, ought, therefore, to be confined to those spasms arising from nervous erethism or direct exhaustion of the nervous energy; where long abiding pain, great restlessness, render even a tempo-

rary assuagement desirable.

Dose and form of exhibition. As opium acts with extreme rapidity and power on infants, it ought to be administered with the utmost foresight; and we must carefully ascertain the time its influence lasts, so as to guard against the danger of an overdose, or one too frequently repeated. . To infants under three months, not more than the eighth or fourth of a drop of laudanum ought to be given at once, till the effect has been "The infant frequently begins to slumber immediately on the administration of the first dose of the medicine, and continues to sleep for several hours,—the effect lasting from four to five hours or more at a time. Hence an opiate should not be renewed oftener than every third or fourth hour -twice or thrice a day being in general sufficiently often. Conditional orders ought always to be given to suspend the medicine while the child sleeps, or until the symptoms have returned. To children from two to six years old, from 1 to 3 drops of laudanum may be given every two hours; and in extreme cases at even shorter intervals." (Diseases of Children, p. 112.)

To obtain definite effects, the tincture of opium deserves a preference, the dose being one drop at six months old, -two after the first year, and from five to ten after the fourth year. And the best form of administration, to very young children, is by diffusing a given quantity of it in a mixture with simple syrup, so that the dose shall be always determinate. Thus, a mixture of an ounce of water, with 6 drachms of syrup, will contain about 12 teaspoonfuls, to which we can add, at discretion, one or more drops of the tincture. The camphorated tincture of opium is a convenient form for children. It may be exhibited in doses of from 2 to 20 drops, according to the age. In reference to the other officinal preparations of the drug, it may be remarked that the compound powder of ipecacuanha, or Dover's powder, is a mild and safe opiate for children, and not so liable to disagree as any other. In sensitive erethism of the brain, the "pavor nocturnus et vigiliæ immodicæ" of Lazernu, Dover's powder is said to be the best remedy. great service in cases where much restlessness and debility are present with convulsions. And in infantile dysuria, very small doses given two or three times a day, after the bowels have been freely evacuated, generally produce an excellent effect. From a quarter to half a grain may be given as a dose, during the first three months; and from 1 grain to 3 after a year old. The compound powder of chalk, with opium, acts more energetically and requires greater caution. From half a grain will be borne during the first six months, and 1 or 2 grains after that period thrice a day; or 4 grains to a child

four years old.

When convulsions seem to depend on a very irritable state of the bowels, Dr. Locock recommends 1 or 2 grains of the compound chalk powder to be given, according to the age of the child, and repeated every hour or two, till the desired effect is produced. (Cyclopædia of Practical Medicine, article Convulsions.)

In the event of poisoning by opium, the main indications are to remove the poison as soon as possible from the stomach, to prevent the invasion of lethargic stupor, and to counteract the symptoms of congestive apoplexy. The first indication is fulfilled by means of emetics and the stomach-pump, the second by affusion of cold water, and the third by prompt abstraction

of blood from the jugular vein or nape of the neck.

Opium and other narcotics readily produce their effect when externally applied, so delicate and susceptible is the cutaneous surface in the child. Its external use is highly spoken of in a paper published in the fifth volume of the Journal Général In removing the irritation and fretfulness attendant on dentition, frictions over the spine and belly, with a little anodyne liniment, have been effectual; acting as an opiate, without inducing the injurious effects on the stomach, which the internal exhibition of the drug too often causes; and Mr. North conceives that opiate frictions upon the chest and abdomen, may be frequently of much more service during convulsions, than any internal remedies. The most efficacious mode of applying spicy opiates to the abdomen of children, is either to rub them upon the part, or to make a confection of oil of mace, camphor, and opium. Of this, a proper quantity may be spread upon leather, with a margin of empl. plumbic. resina, and immediately applied over the part. (Notes to Underwood.)

Dr. Bow, of Alnwick, has been in the habit of thus employing opium, on an extensive scale, for some years, in the inflammatory ailments of children; and its benefits in croup and bronchitis, are, according to him, very great. The formula is

subjoined (No. 296.)

His process is thus described. "I order the child to be laid across the nurse's knee, with the head depending, so that the

ammoniacal vapour, from the liniment, may not affect the nostrils and eyes. I then pour the liniment on the breast in such quantity as to require a brisk motion of the nurse's hand, to prevent it from running down the sides. This she applies to the breast, neck, and bowels; and as it dries I continue to renew it, until from 2 to 4 drachms or thereabouts have been used. An hour afterwards, if there have been no amendment, I repeat it, applying the liniment also to the back and limbs." (Lancet, March 18, 1837.)

Dr. Glede recommends in hooping-cough, after the exhibition of an emetic, the *endermic* application of acetate of morphia to the pit of the stomach. The dose is from $\frac{1}{10}$ th of a grain

cautiously increased to 1 grain twice in the day.

Hufeland recommended the application of opiate plasters to soles of the feet. Its administration by enema has been already noticed. The proportion is a drop of laudanum for

every six months the child is old.

As a collyrium, a solution of opium may be used in all ophthalmic affections, characterized by debility, acute sensibility, intolerance of light, and immoderate secretion from the Meibomian follicles.

290.

R Aquæ destill., 3j. Mist. acaciæ, 3ss. Syrupi Simp., 3ss. Tinct. Opii, guttam. M

Dose, a teaspoonful, repeated every half-hour till rest be procured; but after the first month double that quantity may be begun with. — Evanson and Maunsell.

292.

R Decocti Althææ, ʒiv.
Vini Opii, gtt. iv.
Oxymel. Scillæ, ʒij.
M. Sit linctus.

S. Ateaspoonful occasionally in simple cough.—Gölis.

291.

R Aq. Fœniculi, 3j.
Tinct. Opii, gtt. vj.—viij.
Syrup. aurantii, 3vj.
M. Sit mistura.

S. A teaspoonful every hour to a child of two years.-Henke.

293.

R Aq. Fæniculi, 3j.
Tinct. Opii, gtt. xv.—xx.
Sp. Ætheris sulph., 3ss.
Syrupi aurantii, 3vj.
M. Sit mistura.

S. To be consumed in two days by children of from four to ten years.—Do.

R Dec. Salep., 3ij.
Tinct. Opii Camph., gtt.
xxx.

M. Sit mistura.

S. A teaspoonful every hour or two, in diarrhea, to a child from one to two years old.

296.

R Opii, zj.
Saponis, zss.
Linim. Camphor. Co.,
zviij.

M. Digere per dies aliquot, et effunde linimentum.

Bow.

295.

R Empl. Galbani. Camphoræ. Opii, āā, Əss. M. Sit massa empl.

S. To be applied to the soles of the feet.—Hufeland.

297.

R Aq. Menthæ, P., ʒiij.
Tinct .Opii, gtt. viij.-xij.
Mist. Acaciæ.
Syrup. aurantii āā, ʒss.
M. Sit mistura.

S. A tablespoonful every second hour in diarrhæa accompanying scarlatina.

Wendt.

ORYZA SATIVA. The grain, or rather endosperm of the seed of rice, affords a highly nutritious article of diet. It contains about 96 in the 100 of fecula, in which there exists a large proportion of azote. Being of a bland nature, and easily digestible, it has been used with advantage during irritable and inflammatory conditions of the bowels.

Mucilage of rice may be prepared by boiling 2 ounces of fine rice flour with a quarter of a pound of loaf sugar in a pint of water, till it become a clear jelly, straining it through a cloth,

and letting it stand till cold.

Rice gruel may be made as follows: wash and soak 2 large spoonfuls of rice in cold water for an hour; pour off the water and add a pint and a quarter of fresh milk; stew it gently till the rice is sufficiently tender to pulp through a sieve; return the pulp and milk into the pan with a very little salt, and let it simmer on the fire ten minutes, after which add sugar to the taste.

OVUM. The egg of the hen *Phasianus Gallus* contains the *yolk* or *yelk*, surrounded by albumen. The yolk is gently laxative. It contains about the of its weight of oil. Jörg

recommends, as a substitute for milk to children reared by hand, the yolk of an egg beat up into an emulsion with a pound of tepid water, and sweetened with sugar. Hufeland extols his potus antatrophicus as a very valuable remedy against the emaciation resulting from mesenteric disease. He directs, according to the age, half or a whole yolk to be treated with a quart of water, so as to form a milky fluid; to this a little salt is to be added, and the child is to take it as its ordinary drink.

OXYMEL. This is chiefly employed as an adjunct to cooling and expectorant remedies. A couple of ounces in a quart of water forms an agreeable drink in febrile and exanthematous disorders; but is improper if there be any tendency to diarrhæa, or during the exhibition of mercurials. Externally it has been much used as the basis of gargles, on account of its detergent qualities; and as an enema, in the proportion of 2 or 3 large spoonfuls.

298.

R Oxymellis, 3j.
Syrup. papav. albi.
Syrup. Mori āā, 3vj.
Tinct. Tolut. gtt. xx.
M. fiat linctus.

S. A teaspoonful occasionally.

OXYMEL SCILLÆ. Oxymel of squill possesses considerable powers as an expectorant, if allowed to pass slowly over the fauces, in the form of linctus. It also exerts diuretic effects. As an emetic, it is occasionally administered to infants, but is best conjoined with other medicines of the same class. Wildberg recommends, as a prophylactic against measles, a combination of equal parts of antimonial wine and oxymel of squill; he orders 10 drops morning and evening for infants a year old, and increases the dose by 5 drops for every additional year.

Dose and form of exhibition. When it is the intention to provoke vomiting, a teaspoonful of the oxymel of squill may be exhibited every twenty minutes to infants within the month,

and to older children every ten minutes, until it act. It may be advantageously united with ipecacuanha or antimonial wine, or with both, which augments the expectorant effect, and thus constitutes a useful medicine in hooping-cough. It may be also given along with manna, solution of acetate of ammonia, decoction of senega, in the proportion of 2 or 3 drachms to a four ounce mixture. As an expectorant, the dose is 10 drops every third hour.

299.

R Oxymel. Scillæ. Syrup. Althææ. Mist. Acaciæ, āā 3ss. M. Ut fiat linctus.

S. A little to be slowly swallowed from time to time.

Pari

300.

R Mist. Acaciæ.
Oxymellis, āā, ʒij.
Oxymel. Scillæ, ʒss.
Tinct. Opii Camph., ʒj.
M. Sit linctus.

S. A teaspoonful occasionally.

PETROLEUM. Barbadoes tar has been employed, by certain German practitioners, in the form of friction over the belly, to promote the expulsion of, and relieve the tormina occasioned by worms. Rosenstein recommends it to be used along with bruised garlic, when the pain is very violent. It may be also applied in friction along with some volatile oil for the same object. It ought not to be rubbed too strongly nor too frequently, as it is apt to cause inflammation and vesication.

301.
R Ung. Sambuci, Zij.
Petrolei, Zij.
Ol. Absynthii, Zss.
M. Sit embrocatio.

S. To be rubbed upon the umbilical region in verminous colic.—Dornbluth.

PHOSPHORUS. Phosphorus, on account of the powerfully stimulant effects it exercises on the animal economy, has been recommended by that eminent Danish physician Wendt, in those apparently hopeless stages of typhoid and eruptive fevers, where consciousness is extinct, where the patient lies in a

state of death-like collapse, when the pulse is hardly perceptible, the breathing stertorous, and the extremities cold. He extols especially the combination with the oil of Dippel, but remarks that this remedy is, like opium, inadmissible for infants.

Dose and form of exhibition. Phosphorus ought to be given dissolved in some menstruum, as ether, fixed or volatile oil, and always with the utmost circumspection. The dose to

begin with is from $\frac{1}{30}$ th to $\frac{1}{20}$ th of a grain.

Externally, the ethereal or oily solution has been employed in the form of embrocation, in cases of paralysis, contractions, &c. Löbenstein Lobel tried this practice in hooping-cough; and, according to his account, succeeded in curing three cases of long standing, in which the most powerful internal and external remedies had been fruitless, by means of the liniment announced in the subjoined formula.

302.

R Phosphori, gr. iij. Camphoræ, gr. xij. Ol. Carui, 3iij. M. Sit embrocatio.

S. To be used thrice a day. Löbenstein.

It was rubbed upon the chest, stomach, and spine; and occasioned, about the third or fourth day, a petechial looking efflorescence.

303.

R Æther. Phosphor., 3ij.

Detur ad vitrum epist. vitreo
munitum.

S. One to five drops every two hours in any mucilaginous drink, alternately with infusion of serpentaria, in malignant scarlatina.—Wendt.

PLUMBI ACETAS. Acetate or sugar of lead, is, in moderate doses, sedative and astringent. It acts directly upon the nerves of the stomach, and its influence is gradually extended over the whole system. The German physicians order it in cases of profuse mucous discharge, in the so called

phthisis pituitosa; as also in the advanced stage of hooping-cough, where the patient's health is declining under excessive bronchial secretion.

Acetate of lead has been very favorably mentioned by certain American physicians as a remedy in infantile cholera. Dr. Mann, of Massachusetts, Dr. Irwin, of Charleston, and Dr. Chapman, all speak strongly in behalf of its usefulness in this

dangerous affection.

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Hamilton recommends it both internally and externally as peculiarly serviceable in ulcerated sore throat; and Dr. Mitchell gave it with success to infants of from ten to twenty months old, in the dose of from the total total a grain or a grain of sugar; and Dr. Eberle informs us, (Treatise on the Diseases of Children, Philadelphia, 1837,) that he has employed this article in four or five instances, with a result sufficiently favorable to induce the belief that considerable benefit may be derived from its use, provided the action of the liver has been excited by the previous employment of mercurials. So long, however, as the evacuations indicate the existence of functional torpor of the biliary organs; and there is reason to believe that the intestines are charged with feculent matter, this and all other astringent substances ought to be withheld. As a remedy in hemorrhagic diseases, it is of very ancient date.

Dose and form of exhibition. Acetate of lead may be ordered to children in the dose of from the fith of a grain to half a grain in solution, combined with highly dilute acetic acid, in order to counteract its deleterious effects, twice or oftener daily where its sedative or astringent effects are rapidly required. To children above two years it may be conjoined with a minute quantity (toth of a grain) of opium, or 1 grain of Dover's powder.

In an undue dose, acetate of lead is a virulent poison; determining, if the quantity be considerable, erosion of the gastro-intestinal mucous membrane, but if the quantity be less, morbid decomposition of the blood. The proper treatment consists in employing emetics, soluble sulphates; and anodynes and leeches if much irritation or inflammation be present.

As an external application, the acetate has been most extensively employed in collyria and lotions in all cases requiring the aid of local astringents. Thus, a solution of a grain or two in a fluid ounce of distilled water forms a common eye-wash

in the ophthalmia of new-born children. Caution must be observed in applying it to inflamed surfaces, more especially if denuded of the cuticle; since recent observations have proved that during its external use the baneful effects of the lead may be readily developed, in consequence of atmospheric influence; hence the danger of resorting to it as a lotion in crusta lactea or intertrigo.

304.

R Plumbi Acet., gr. ij. Solve in Aq. destill., Ziij. Syrupi, Zj. M.

S. A tablespoonful thrice a day in the third stage of hooping-cough .- Wendt.

306

R Plumbi Acet. Pulv. Ipecac. Co. āā, gr. 1.

M. Sit pulvis.

S. One every two or three hours in infantile cholera.

Eberle.

305.

R Plumbi Acet., gr. viij. Solve in Aq. rosæ, Zviij. M.

S. A tablespoonful every third hour. - Hamilton.

307.

R Plumbi Acet., gr. iv. Aq. destillat., Ziv. Mist. Acaciæ, 3ss. M.

S. Collyrium in the blennorrhœal ophthalmia of new-born infants.—Wendt.

POTASSÆ ACETAS. Acetate of potash, is in moderate doses diuretic, but in large doses purgative. It undergoes decomposition in the first passages, and hence, probably, its alkali only reaches the kidney. It has been given advantageously in hydropic diseases, as in hydrocephalus, and the anasarca consecutive to scarlatina; where it may be conjoined with digitalis and alternated with calomel. This salt is also said to possess considerable deobstruent powers, and has been accordingly administered with success, combined with other corresponding remedies, in visceral obstructions and infantile As a deobstruent it ought to be given in mesenteric disease. doses which will not purge, but simply tend to maintain the regular alvine evacuation; otherwise the patient is debilitated without controlling the disease.

Dose and form of exhibition. Acetate of potash may be ordered in any bland demulcent fluid, in the dose of from 5 to 15 grains. It is better to give it in small doses frequently repeated than in a single full dose. In particular instances it may be combined with other medicines, as infusion of senna, extract of dandelion, rhubarb. The Prussian Pharmacopæia contains a "Liquor kali acetici," which is a solution of one part of the salt in two of water.

308.

R Potassæ Acet., 3iss. Aq. Fœniculi, 3iss. Sacch. albi, 3ij. M. Fiat mistura.

S. A dessert-spoonful every six hours.

POTASSÆ BICARBONAS. Bicarbonate of potash, is antacid and diuretic. It forms a useful antacid, provided no flatulence be present; since then, the additional extrication of gas in the stomach will but add to the pain and distress. Like other alkaline carbonates it exerts a sedative influence upon the mucous membranes; and serves to equalize and restore the peristaltic action of the bowels. Hence its utility in tabes mesenterica, if we endeavour at the same time, by a well regulated diet and appropriate remedies, to impart tone and vigour to the stomach and It has been recommended in certain inflammatory intestines. affections, particularly croup. Hellwag reckons it a most efficient resolvent of the plastic exudation, in which he asserts his having discovered the presence of free acid. Several other continental physicians, Voos, Dorfmüller, Eggert, (who terms it a specific against croup,) and also Hufeland, speak favorably of its operation. The last named authority has seen benefit derived from it, not only in croup but likewise in various pulmonary disorders, characterized by tendency to deposition of coagulable lymph. It augments, according to him, the efficacy of calomel, diminishes the necessity of large doses, but does not, as Hellwag will have it, supersede the necessity of depletion; although, in the majority of cases, it may form a valuable auxiliary to leeches, antimony, and mercurials.

It has been prescribed in the following affections:

In scrofula, this salt is said to arrest the formative process,

checking the effusion and deposition of coagulable lymph. Richter conceives that a pre-requisite to its exhibition is a certain degree of energy in the functions of digestion and assimilation; it is consequently incompatible with a disposition to colliquative profluvia.

In convulsions, when connected with the presence of undue acidity in the first passages, the bicarbonate, by neutralizing the excess of acid, will exert a soothing and antispasmodic effect. Michaelis, Fleisch, and Schaffer speak highly of its

beneficial results under such circumstances.

Bicarbonate of potash, saturated with lemon juice, (in the proportion of 1 drachm of the former to 2 or 3 ounces of the latter,) constitutes, when diluted with water, an elegant diaphoretic, diuretic, and slightly laxative draught; and if any febrile heat be present is an excellent remedy. It undergoes decomposition in passing through the system.

Vinegar of squill, saturated with bicarbonate of potash, is said to have its therapeutic action exalted; a combination very efficacious in chronic hydropic ailments, and in anasarca supervening upon scarlatina. According to Wendt, it often disagrees with the stomach, acting as an emetic, unless associated with

some light bitter aromatic.

Dose and form of exhibition. Bicarbonate of potash may be administered internally in the dose of a few grains, dissolved in any aromatic water, and repeated according to circumstances. The best corrective of its taste is table-beer. In convulsions it ought to be given in large doses, at short intervals. In scrofula, it is best administered in combination with rhubarb.

Externally, the crude carbonate of potash has been employed, in the quantity of from half an ounce to 2 ounces, for making an alkaline bath, in which the patient should remain a quarter

of an hour.

309.

R Aq. Fæniculi, zvij. Potass. Bicarb., Jij. Syrupi, zj. M. Sit mistura.

S. A dessert-spoonful occasionally.

310.

R Potass. Bicarb., 3ss. Aq. destillat., 3iss. Solve.

S. Ten to 40 drops daily in infantile convulsions.

Hamilton.

R Potass. Bicarb., gr. v .x - xx. Mist. Acaciæ, 3j. Vitell. Ovor. No. ij. Aq. Font., Ziij. Syrup. commun., 3j.

S. From a dessert to a tablespoonful, every two hours, for a child above one year.

M. f. l. a. Emulsio.

Fränkel.

312.

R Rad. Rhei, 3j.—ij. Digere per hor. c. Aq. fervid, Zj. in Colat. solve

Potass. Bicarb., 9j. Syrup. Aurantii, 3ss. M. Sit mistura.

S. A tablespoonful three or four times a day, according to

313.

R Succi Limonum rec., 3ss. satura Potass. Bicarb. Aq. destill., Zij. Syrup. Althææ, 3ss. M. S. A dessert-spoonful every

hour.—Frankel.

314.

the age.—Fränkel.

R Succi Limonum rec., 3j. satura Potass. Bicarb.

Adde

Aq. destill., Ziv. Aq. Lauro-cerasi, 3ss.—

Syr. Aurant., 3ss.

S. A tablespoonful every hour to a child of three or four years, labouring under febrile excitement from worms.

Wendt.

315.

R Potass. Bicarb. 3ij. Succ. Limon. q. s. ad saturationem Infus. Rhei, Ziss. Mannæ, 3ss. M. Sit mistura.

S. One or two teaspoonfuls to infants, and three teaspoonfuls to older children every two hours, in gastric disorders.

POTASSÆ HYDRAS. Hydrate of potash, is the old causticum commune acerrimum or strongest common caustic. It is a most powerful escharotic, quickly destroying the vitality of the texture with which it comes in contact, extending its action to a considerable depth beneath the surface, and is thus employed for the cure of scrofulous ulcers of a torpid character. where the surrounding integuments are undermined. generally preferred for forming issues; and the most convenient mode of employing it for that purpose is to apply to the skin a piece of linen spread with adhesive plaster, having a circular opening in its centre corresponding to the intended size of the issue; and then to rub upon the skin, within the opening, a piece of the caustic previously moistened at one end. The application is to be continued till the life of the part is destroyed, when the caustic should be carefully washed off. Poultices are afterwards to be applied till the separation of the eschar is effected.

POTASSÆ NITRAS. Nitrate of potash, is considered refrigerant and antiphlogistic; and as such is used in inflammatory diseases. Its action is first exerted upon the stomach; and its effects extend to the circulation, diminishing the frequency of the pulse and the heat of the body. It generally promotes the secretion of urine and sweat, and has a tendency to keep the bowels in an open condition. In delicate sensitive subjects, its protracted use is sure to disorder the functions of digestion and assimilation. Hence, Wendt reprobates its general employment in the case of tender infants, administering the milder neutral Berends objects to its exhibition salts instead. exanthemata, from a belief that it lowers the energy of the superficial capillaries and hinders the development of the disease; and also because infants do not bear it well. Henke and Joerg, however, prescribe it to children for the same complaints in which it is indicated in adults. The latter physician extols it as a powerful derivative, particularly in hydrocephalus acutus; he gives it in combination with rhubarb or toasted jalap. Nitrate of potash, along with dried carbonate of soda, has been found advantageous in remittent fever, if much heat of skin be present, particularly if the palms of the hands or soles of the feet be very hot; but it ought to be guarded by an opiate.

or well diluted in some mucilaginous mixture. A linetus in which this salt is allowed slowly to diffuse itself over the mouth and fauces, is an old remedy against cynanche.

Dose and form of exhibition. Nitrate of potash may be given to children, of from one to three years old, in the dose of from 2 to 3 grains; to those between four and seven years in the dose of 4 or 5 grains. It is very frequently prescribed along with tartar emetic and calomel, forming a combination called the nitrous powder. Of a mixture containing 8 or 10 grains of nitrate of potash, the eighth of a grain of tartar emetic and half a grain of calomel, 2 or 3 grains may be exhibited every second or third hour. Of a solution of a scruple in 3 or 4 ounces of water, the dose is a dessert-spoonful. Tartrate of potash, manna, solution of acetate of ammonia, are frequent adjuncts. In an overdose nitrate of potash produces violent symptoms of gastro-intestinal irritation, requiring the demulcent and antiphlogistic medication.

Nitrate of potash dissolved in water, (a drachm to a pound,) with the addition of honey and vinegar, is used as a gargle in inflammatory sore throat. Fränkel recommends as a suitable gargle in such cases 2 drachms of nitrate of potash dissolved in 4 or 5 cupfuls of infusion of elder-flowers, together with 4 spoonfuls of wine-vinegar and 2 spoonfuls of honey; and Dewees orders in cynanche tonsillaris equal parts of it and sugar to be taken, so as to dissolve slowly in the mouth in

small quantities at a time.

316.

R Potass. Nitratis, Əij.
Extr. Hyoscyami, gr. iij.
Aq. Fæniculi, Ziss.
Syrup. Althææ, 3j.
M. Sit mistura.

S. A teaspoonful every two hours to a child labouring under pulmonic inflammation. Fränkel. 317.

R Carb. Sodæ exsicc., gr.j.
Pulv. Ipec., gr. 4.
Pulv. Ipec. Co., gr. j.
Pulv. Cinn. Co., gr. j.
Nit. Potass., gr. ij.
M. Ft. Pulveres tales, vj.

S. One every second or third hour in some barley water or thin gruel.

Evanson and Maunsell.

R Calomelanos, gr. ij.
Potass. Nitratis, gr. v.
Pulv. Glycyrrhiz., gr. x.
M. Sit pulvis.

S. To children above six years a whole powder, to those under that age half a powder every two hours.—Fischer. 319.

R Potass. Nitratis, Əij.
Aq. Sambuci, Ziij,
Liq. Ammon. Acet.
Syrup. Althææ, āā, 3vj.
Vini Antimon., 3ss.
M. Sit mistura.

S. A tablespoonful every hour, in the inflammatory catarrhal cough of a six or eight years' child.—Fränkel.

320.

R Mucilag. Sem. Cydon., 3ij. Potass. Nitratis, 3j. Oxymellis, 3iss. M. Sit linctus.

S. A teaspoonful to be slowly swallowed in cynanche.

Fischer.

321.

R Tinct. Jalapæ, 3iss.
Vini Ipecac., 3j.
Potass. Nitratis, 9j.
Syrupi, 3iij.
Aquæ, 3iiss.
M. Sit mistura.

S. Fever mixture. Dose, from a teaspoonful to a table-spoonful every six hours.-Fox.

POTASSÆ SULPHAS. Sulphate of potash, is deobstruent and cathartic, but from its sparing solubility is rarely given alone, and seldom or ever in solution. It seems to act by stimulating the excretory ducts of the liver and pancreas in its passage along the duodenum. Combined with rhubarb in the proportion of about a drachm of the salt to 10 grains of the root, Dr Fordyce found it an excellent alterative cathartic in the visceral obstructions of children, characterized by a tumid abdomen and defective digestion and nutrition. In union with aloes it exercises a beneficial agency in disordered states of the biliary secretion. It is a useful adjunct to anthelmintic remedies, especially sulphate of iron.

Dose and form of exhibition. Sulphate of potash may be ordered in the quantity of from 5 to 15 grains in any aromatic or mucilaginous excipient. In too large doses it is apt to make children vomit.

R Potass. Sulphatis, gr. x. Pulv. Rhei, gr. v. Oleo-Sacch. Fœnic., gr. x. M. Sit pulvis.

S. A powder twice or thrice in the day, for children above six years.—Brande.

POTASSÆ TARTRAS. Tartrate of potash, is a mild cooling aperient, operating, like most of the neutral salts, without griping and producing watery stools. It has the property of rendering other purgatives, as for instance, senna and scammony, less griping by accelerating their operation. It exercises an influence over the whole of the intestinal canal, and is very prompt in its action.

Of all saline substances, says Wendt, this is for inflammatory complaints the most appropriate, from its acting as a derivative, and diminishing the determination of blood to important organs. By promoting copious serous evacuation, it lessens the mass of circulating fluid, and thereby abates the phlogistic diathesis.

To hasten its purgative effect, it is commonly combined with infusion of senna, or rhubarb and manna. And this combination is frequently prescribed to ensure the removal of calomel from the bowels.

Dose and form of exhibition. Tartrate of potash may be given to children, dissolved in any bland fluid, in the dose of from half a drachm to a drachm every two hours, until it produce the intended result.

323.

R Potassæ tart., 9ss. Aq. Fænicul., 3j. Syrup. Rosæ, 3ss. M. Sit mistura.

S. Aperient mixture for infants. Dose, a teaspoonful.

324.

R Potass. tart., 3iij. Dec. Hordei, Ziij. Syrup. Althææ, Zj. M. Sit mistura.

S. A tablespoonful every second hour for a child between one and three years of age.

Fränkel.

R Potass. tart., 3ij.
Potass. nitr., 9ij.
Solve in
Dec. Hordei, 3iv.
Adde
Syrup. Simpl., 3j.
M. Sit mistura.

S. A tublespoonful every hour in mesenteric fever.—Wendt.

326.

R Potass. tart.. 3iij.
Solve in
Aq. destill., 3iij.
Adde
Vini Antimon., 3j.
Liq. Ammon. Acet., 3iij.
Syrup. Althææ, 3j.
M. Sit mistura.

S.] A dessert-spoonful every hour for a child, between the age of four and five, labouring under acute rheumatic fever.

Vogt.

327.
R Potass. tart., 3j.
Vin. Antim., 3ss.
Aq. Anethi, 3j.
Oxymel. Scillæ, 3ss.
Ext. Glycyrrhizæ, 3j.
M. Sit mistura.

S. One or two teaspoonfuls frequently for an infant of twelve or eighteen months, in catarrhal fever.—Fränkel.

POTASSÆ BITARTRAS. Bitartrate of potash, or cream of tartar, is a cooling purgative and diuretic. Its action is felt over the whole length of the intestinal canal. It stimulates the exhalents and produces watery stools; from this latter property, as well as from its tendency to excite the action of the kidneys, it is much used in dropsical affections. Thus, in remittent fever, when the bowels are not irritable, the solution of cream of tartar possesses many advantages, as it acts on the kidneys, while it allays thirst and tends to keep the bowels open. Its solution in boiling water, sweetened with sugar, flavoured with lemon peel, and allowed to cool, forms an acid, not unpleasant cooling drink, called imperial; advantageously used in febrile affections, and much employed as a domestic remedy.

Dose and form of exhibition. Cream of tartar may be given to children, from one to three years old, in the dose of from 10 to 20 grains, and to children somewhat older in the dose of half a drachm. As a diuretic it is best given in divided doses largely diluted with water. In consequence of its sparing solubility in water it is mostly prescribed as an aperient in the form of electuary, combined with jalap or sulphur, and the confection of senna.

A refrigerant and diuretic drink, called *cream of tartar whey*, is made by sprinkling gradually into a pint of milk, when nearly boiling, about 2 teaspoonfuls of the salt, stirring till the

curd separates, then straining off the clear liquor.

Dr. Dunglison recommends as a good laxative for obviating the tendency to constipation, a mixture formed by pouring a quart of boiling water on an ounce of the sulphate of magnesia mixed with a drachm of bitartrate of potash. He directs the patient to take a wine glassful of the solution every night and morning, until the bowels are brought into proper train. The bitartrate, from its acid character, masks the disagreeable taste of the sulphate of magnesia, and the combination rarely fails to restore the intestinal functions to their healthy condition. (Op. cit. p. 241.)

In hepatic epilepsy, cream of tartar dissolved in decoction of dandelion root, sweetened with liquorice, has been found a

valuable medicine when persevered in for some time.

Laxative pastilles for children are made by boiling together half an ounce of cream of tartar, 4 ounces of manna, and 10 ounces of water, until the mass become of a proper consistence to divide into lozenges of 10 or 12 grains each. (Edwards and Vavasseur, Nouveau Form. Pratique.)

POTASSII SULPHURETUM. Sulphuret of potassium, is said to be diaphoretic. It acts, moreover, as an antacid, and produces the general effects of sulphur upon the system. It has been exhibited with occasional benefit in chronic mucous catarrh, and in the advanced stage of hooping-cough, when the bronchi are charged with excess of phlegm. It acquired a short-lived reputation as a remedy in croup, after the publication of Double's essay, to which the prize offered by Napoleon for the best memoir on this disease was awarded. It is apt to cause squeamishness and disordered digestion; and its taste is

very offensive to children. In large doses it is highly poisonous, and occasions death according to Orfila, by corroding the stomach and depressing the powers of the nervous system.

Dose and form of exhibition. The dose of the sulphuret of potassium is from 1 to 4 grains, every three or four hours, in cases of infantile croup. It may be ordered in solution with

syrup or liquorice-juice.

Dissolved in water it has proved very efficacious as an external application in certain cutaneous diseases, as porrigo, larvalis, and scutulata; and is said to have succeeded in curing itch in infants, where the sulphur ointment has failed. It may be used, for this purpose, in the form of lotion, bath, or ointment. For a lotion it is to be dissolved in water in the proportion of 10 or 15 grains to the fluid ounce, and for a bath half a drachm may be added to a gallon of water. It has been recommended to add a very small quantity of muriatic or sulphuric acid to the solution in either case.

328.

R Potassii Sulphur., 3ss. Aq. Sambuci, 3j. Syrup. Althææ, 3ji. M. Sit mistura.

S. A large teaspoonful every second hour, for an infant of six months.—Stiebel.

329.

R Potassii Sulphur., gr.xij. Sacchari albi, Zj. Aq. Flor. Aurantii, Ziij. M. Sit mistura.

S. A teaspoonful every hour or every half-hour.—Fritzel.

330.

R Sacchari albi, Ziss.

ope lenis caloris, solve in
Aq. Fæniculi, Zvj.
adde
Potassii Sulphur., Əss-Əj.
M. Sit mistura.

S. A teaspoonful every two hours for children from one to four years old in croup.

Chaussier.

331.

R Potassii Sulphur., Zj.
Solve in
Infus. fol. Conii, (ex.
3ij.) lb. j.
M. Sit solutio.

S. To be applied as a lotion in tinea capitis.—Wendt.

R Potassii Sulphur., 3iij. Saponis Hispan., 3j. Liq. Calcis, 3viij. Sp. Vini rect., 3ij. M.

S. Lotion to be applied twice a day in tinea. Fränkel.

PRUNA. The prune, or dried fruit of the prunus domestica, is considered laxative and nutritious; and stewed with water forms an excellent diet in case of costiveness, especially during convalescence, from febrile and inflammatory diseases. As prunes impart their laxative properties to water, in which they are boiled, they serve as a pleasant and useful addition to purgative infusions and decoctions. Taken in too large a quantity they are apt to cause flatulence and griping.

PRUNI LAURO-CERASI FOLIA. Leaves of *cherry-laurel* possess properties similar to those of hydrocyanic acid; and the water distilled from them is much employed in various parts of Europe for the same purposes as that active medicine.

Aqua lauro-cerasi is an officinal preparation of the Dublin College; but that kept in the shops is very unequal in strength, the variation depending on deterioration by age and the qualities of the leaves. To obviate this objection, it has been proposed to substitute the distilled water of the bitter almond for that of the cherry-laurel, as both contain the same active principle, namely, volatile oil.

Drs. Evanson and Maunsell regard cherry-laurel water as a sedative peculiarly serviceable in allaying pain, spasm, or convulsion, arising from intestinal irritation in the child. (Op-

cit. p. 113.)

According to Fränkel it may be given with advantage in inflammatory ailments; in cases of deep seated irritation, hooping-cough, painful dentition, and the like. It has been found efficacious as an anthelmintic; and also in removing symptomatic affections resulting from worms; as a palliative in morbus cæruleus along with local depletion, (Wendt); and in carditis. (Puchelt.) It has been extolled for its virtues in resolving visceral obstructions in scrofulous children of a

sanguineo-nervous temperament; and as a soothing remedy in tubercular phthisis and tabes mesenterica, when inflammatory symptoms co-exist. In these cases it is best given in combi-

nation with antimonial wine. (Tourtual.)

MM. Krimer and Brosseri recommend inhalation of the vapour of the cherry-laurel water in hooping-cough. One drachm is directed to be dropped on hot sand, and the patient made to inspire the vapour, thence arising, for five, ten, or fifteen minutes at a time frequently in the day.

Dose and form of exhibition. The distilled water of the cherry-laurel is ordered, for new-born children, in the dose of 1 drop; for those a few months old 2 drops, in infusion of chamomile, (Pittschaft Hufeland's Journal, Bd. 62,) to those more advanced 6—8 drops every two or three hours.

333.

R Aq. Lauro-Cerasi, 3ii. Vini Antimonii, 3j. M.

S. Of this mixture from 12 to 15 drops to be taken every third hour by a child five or six years old, in tubercular phthisis.—Tourtual.

334.

R Succ. Citri rec. express.,

Satura

Potass. Bicarb.

Adde

Aq. destill., Ziv.

Aq. Lauro-Cerasi, 3ss.—

Syrup. flor. Aurant., 3ss. M.

S. A tablespoonful every hour to a child from three to six years, to allay verminous irritation.—Wendt.

335.

R Mist. Acaciæ, 3ss.

Aquæ, 3j.

Aq. Lauro-Cerasi, gtt.iv.

Syrupi Aurantii, 3ss.

Tinct. Opii, guttam.

M. Sit mistura.

S. Compound sedative mixture. Dose, a teaspoonful every half-hour till rest be procured.—Evanson and Maunsell.

QUINÆ DISULPHAS. Disulphate of quina produces upon the system, so far as we are enabled to judge by observation, the same effects with Peruvian bark, without being so apt to nauseate and oppress the stomach: hence, it is admirably adapted as a medicine for children during convalescence from febrile and inflammatory disease; and as a means of restoring

appetite.

Among the diseases for which disulphate of quina has been prescribed with advantage intermittent fevers are the chief. Here it surpasses cinchona, in being more easily administered in large doses, and more readily retained by the stomach. Sundelin has cured by its means cases of simple and double tertian, in the latter of which even a spiced infusion of bark could not be borne. (Archiv. für Mediz. Erfahrung von Horn, 1823.) In simple ague from half a grain to a grain, morning and evening, is generally enough for young children; while to those somewhat older, when the disease is obstinate, from a quarter to half a grain may be required every two hours between the paroxysms. Too large doses produce a feeling of oppression, pain in the head, and vomiting; and in some instances, symptoms almost indicative of inflammation of the Menard has, moreover, occasionally observed dropsy supervene upon excessive doses. (Gerson und Julius, Magazin, Bd. 7.) The experimental researches of Dr. Liber. (Casper's Wochenschrift, 1832,) as to the therapeutic agency of quina endermically administered, deserve notice. He applied a small blister to the epigastrium; and after denuding the cuticle of the vesicated surface, sprinkled there upon 2 grains of the salt of quina each morning during the apyrexia, and covered the whole with adhesive plaster. The inspersion occasions a degree of burning, which, however, ere long subsides, followed by a feeling of compression at the pit of the stomach, retching, and increased flow of saliva. instances, the next expected paroxysm did not take place; in other instances again (as often happens during its internal administration) it recurred with greater violence than ever; but the patient remained afterwards well. This plan having succeeded in more than sixty cases may be advantageously adopted where circumstances exist to contraindicate the exhibition of the medicine, or where children pertinaciously refuse to swallow it. As an anti-periodical it has further been given in intermittent ophthalmia and intermittent epistaxis. (Fränkel.)

Disulphate of quina has been found beneficial in infantile erysipelas. Here, after the bowels have been properly evacuated by a dose of any alterative aperient, small doses ($\frac{1}{3}$ rd to $\frac{1}{4}$ th of a grain) may be ordered every three or four hours in conjunction with a little aromatic confection. In sloughing phagedena, in cancrum oris, (gangrenous erosion of the cheek,) and in aphthæ or thrush, it has been given with like success. It has been advantageously prescribed along with mineral acids, at the sequel of remittent fevers; in malignant scarlatina, when the stage of excitement is passed; and in purpura and pemphigus. In the advanced stage of hooping-cough, where the pulmonic irritation is dependant on debility, the combination of quinine

and ipecacuanha has proved serviceable.

In scrofulous ophthalmia, after removing feculent accumulations from the bowels, disulphate of quina is a very valuable Dr. Mackenzie, of Glasgow, asserts, that he has used it in a great many cases, and that in the majority of instances its beneficial effects "were very remarkable." most of the little patients to whom the quinine was administered "it acted like a charm." Dr. Eberle has also used it in nine or ten cases of this obstinate complaint, and in every instance with unequivocal benefit. In three of these it effected a speedy and complete removal of the inflammation and morbid sensibility of the eyes. It is expedient to observe, however, that its good effects can seldom be obtained at a very early period of the disease, and before the disordered condition of the bowels has been improved by mercurial purgatives and a mild digestible diet. The dose for a child of from three to seven years old should be from a quarter to half a grain thrice daily. (Op. cit. p. 279.)

Tourtual recommends in leucorrhea, occurring in young

girls, a vinous tincture of quinine.

Dose and form of exhibition. Disulphate of quina may be prescribed, as above stated, in quantities of half a grain or a grain, two or three times a day, dissolved in water or suspended in that fluid by the aid of syrup and mucilage. The aqueous solution may be readily effected by the addition of a little sulphuric acid. Thus 8 grains of the salt will dissolve in a fluid ounce of water acidulated with about 12 minims of dilute sulphuric acid; and this is the most eligible mode of exhibiting the medicine in the liquid form. The best correctives of its intensely bitter taste are the preparations of orange-peel. Magendie gives the formula of a syrup of quina, well suited as

a medicine for children. Three ounces contain 8 grains of pulverized disulphate of quina; consequently an ounce of this syrup is equivalent to 3 grains of the salt, and a teaspoonful to half a grain, which is the dose for a child. A wine of quina, made by adding about 3 grains to 2 ounces of sherry wine faintly acidulated, may be given to the extent of 2 or 3 drachms to weakly scrofulous children. A bite of an apple is said to be the best means of removing the bitter taste from the mouth.

336.

R Aquæ Destillat., Ziss. Quinæ Disulph., gr. ij. Acid. Sulph. Arom., gtts. XVI. Syrupi Caryophill., 3ss.

S. Strengthening mixture. Dose, 1 to 2 drachms thrice a day.-Evanson and Maunsell.

337.

R Quinæ Disulph., gr. vj.

Oleo-Sacch. Cinnamom., 3ij.

M. Sit pulvis divid. in partes æquales, No. xij.

S. A powder thrice a day in Spanish wine, in the convalescence from severe illness.

Tourtual.

338.

R Quinæ Disulph., gr. x. Infus. Rosæ, Ziv. Acid. Sulph. dil., mv. Syrup. Rhœad., 5ii. M. Sit mistura.

S. From a teaspoonful to a tablespoonful, twice or thrice a day, in mesenteric atrophy.

339.

R Quinæ Disulph., gr. v. Extracti Glycyrrhizæ, 3j. Subige in massam in pil. xxx. æquales divid.

S. Three pills, twice a day, for a child of eight years old. Sundelin.

340.

R Quinæ Disulph., gr. x. Acid. Sulph. dil., mxv. Aq. Cinnam., Zij. Solve.

S. To children of two years a teaspoonful, and to those somewhat older a dessert-spoonful three or four times a day.

RHEUM. Rhuburb, is the root of one or more species of rheum. In the London Pharmacopæia it is referred to the R.

palmatum.

As a medicine for children rhubarb is of great value, since it not only operates as an evacuant of morbid secretions and accumulations, but also restores the tone of the intestines, invigorates digestion, and acts as an alterative upon the constitution at large. It is singular for its uniting a cathartic with an astringent power; but the latter does not interfere with the former, as the purgative effect precedes the astringent. This latter circumstance renders it an appropriate remedy in certain forms of looseness, as it evacuates the offending matter before it exercises a binding effect upon the bowels.

Employed as an aperient rhubarb is moderate in its action, but has a tendency to gripe. It seems to influence directly the stomach and small intestines; producing fecal rather than watery discharges, and appearing to affect the muscular fibre

more than the secretory vessels.

Rhubarb is extensively prescribed in all disorders arising from constipation, and may be given with safety to the youngest infant. It is ordered in diarrhea with relaxation; and if the biliary secretions be much disordered it may be advantageously combined with minute quantities of ipecacuanha and soda, or mercury with chalk. In infantile aphthæ, when the ejections from the stomach are sour, and the alvine evacuations of a grass-green colour, Dr. Eberle recommends a combination of rhubarb, magnesia, and powdered valerian. See formula (348.)

In many cases of tumid abdomen, rhubarb and sulphate of potash, with or without calomel, with the addition of a little spice or half a drop of oil of anise, mint, or carraway, has been found of extremely great service, if persevered in daily for three or four weeks. The dose ought to be so regulated as not to produce purging, but one or two copious stools every day.

In infantile atrophy dependent on scrofulous disease of the mesenteric glands, Dr. Herrmann (Medicinische Jahrbücher, Bd. 22, Sept. 1837,) tells us he has derived great benefit from exhibiting for a considerable period, with occasional intermissions, the infusion of rhubarb. His dose never exceeds a drachm, but is usually 10 or 15 drops.

Rhubarb combined with alkaline carbonates, interposing occasionally small doses of calomel, is an excellent remedy in

porrigo scutulata, and some other varieties of scrofulous

cutaneous eruptions.

As a general rule rhubarb ought not to be ordered if much general excitement of the system be present. Dr. A. T. Thomson remarks, that in some idiosyncracies it brings on epileptic fits.

Dose and form of exhibition. As a laxative for infants of from two to twelve months old, rhubarb may be given in the dose of from 3 to 6 grains; for children above that age the dose may range from 10 grains to a scruple. As a tonic, the dose for children one or two years old is 2 or 3 grains, twice daily; for somewhat older children 4 or 5 grains. Although rhubarb is most effectual in substance, yet the infusion is sufficiently active for children, and far more eligible as the nauseous taste of the drug can be better disguised. The dose is from a teaspoonful to a tablespoonful repeated more or less frequently as circumstances require; and the best correctives are cinnamon and bisulphate of potash.

Sydenham's practice in marasmus was to administer beer medicated with rhubarb, according to the following receipt: "take of choice rhubarb, sliced, 2 drachms; let it be put into a well stopped bottle with a quart of small beer or any other liquor the child may happen to use. This medicated beer is to be his ordinary drink: when this quantity is drank, a second, and even a third quart of beer may be poured on as before; after which the rhubarb will commonly have lost its virtue. Should the beer, first poured on, be too much impregnated with rhubarb and purge too much, another pint may be added

presently, after the first is consumed."

An aqueous tincture and a syrup of rhubarb are both much employed by German practitioners in the treatment of infantile diseases. The former is procured by infusing an ounce and a half of bruised rhubarb with 3 drachms of carbonate of potash in 15 ounces of hot water. To 10 ounces of the strained liquor about 2 ounces of a vinous tincture of cinnamon are added. The latter is made by digesting for a few hours, 3 ounces of bruised rhubarb, with 6 drachms of cinnamon and 2 of carbonate of potash, in 24 ounces of hot water: to 20 ounces of the filtered liquor 36 ounces of sugar are to be dissolved so as to form a syrup. The dose of the former is half a drachm; of the latter, 1 or 2 teaspoonfuls.

By combination with other aperient medicines rhubarb frequently acquires additional efficacy; while in other cases it seems to temper the action of the substance with which it is associated. Thus calomel, various neutral purgative salts, as Rochelle salt, and tartrate of potash are common adjuncts, but magnesia, as it tends to obviate the griping property and to correct the acescent state of the stomach attendant upon most of the infantile ailments, in which purgation is indicated, is one of the most valuable. Where the bowels are irritable and we wish to abate both its aperient and griping effects, the addition of half a grain or a grain of Dover's powder will be of service.

341.

R Calomelanos, gr. iij.
Pulv. Rhei.
Oleo-Sacch. Fœnic. āā,
Đj.
M. Fiat pulvis.

S. Laxative powder; onethird of the above quantity is the dose for an infant; twothirds for a child from two to four years old; and to older children the whole may be given in half doses at the interval of two hours.-Fischer. 342.

R Pulv. Rhei, gr. iij.
Potass. Bitart., gr. vj.
Oleo-Sacch. Macidis, Эss.
M. Ft. pulvis dent tal. dosi,
No. vj.

S. A powder to be given thrice a day.—Gölis.

343.

R Pulv. Rhei.
Nucis Mosch.
Magnesiæ āā, gr. iij.—iv.
M. Sit pro pulvere.

S. To be swallowed in a teaspoonful of syrup of roses. 344.

R Magnesiæ Carb., 3j. Pulv. Rhei, 9ss. Saponis, 9j. M. Ft. pulvis.

S. Ten grains thrice a day for constipation with acidity, in infants.—Berends.

R Magnesiæ Carb., 3v. Pulv. Rhei, 3j. Pulv. Cinnam., gr. xv. M. Sit pulvis.

S. Dose, from 7 grains to half a drachm.

346.

R Pulv. Rhei, gr. xv.
Magnesiæ, \bar{g} ss.
Aq. Fæniculi.
Aq. Anethi $\bar{a}\bar{a}$, \bar{g} vj.
Syrup. Rosæ, \bar{g} ss.
Sp. Ammon. Arom., gtt.
xv.—xxx.

M. Sit mistura.

S. One or two teaspoonfuls to be taken twice or thrice a day in diarrhea.—Copland.

347.

R Infus. Rhei, Ziss.
Potassæ Bisulph., Zss.
Tinct. Cinnam., Zss.
Syrup. Sennæ, Ziv. M.

S. One to two drachms every third hour.

Evanson and Maunsell.

348.

R. Magnesiæ, gr. iv.
Pulv. Rhei, gr. ij.
Pulv. Valerian., gr. j.
M. Sit pulvis.

S. One every two or three hours until the bowels are freely evacuated.—Eberle.

349.

R Aq. Fœniculi, ʒij.
Potass. Acet., Əj.—3j
Pulv. Rhei, Əss.—Əj.
Syr. Althææ, ʒss. M.

S. Dose, from a dessert to a tablespoonful.—Gölis.

350.

R Pulv. Rhei, Əj. Hydrarg. c. Cretâ, gr. x. Pulv. Aromat. gr. v. M.

S. Three to five grains every third hour.

RICINI OLEUM. Castor oil, is expressed from the seeds of the Ricinus communis. It is a mild cathartic, prompt in its action, usually operating with little griping or uneasiness; and evacuating the contents of the bowels without much increasing the alvine secretions. Hence it is particularly applicable to cases of constipation from collections of indurated fæces; and to those cases in which acrid substances have been swallowed,

or acrid secretions have accumulated in the bowels. From its mildness it is well adapted to diseases attended with irritation, in which the evacuations of the intestines are required with as little constitutional disturbance as possible; and as a general rule it is a good and safe cathartic for children. Infants usually require a greater relative dose than adults, probably because

they digest a larger proportion of the oil.

Some continental physicians, particularly Drs. Odier and Dumont, of Geneva, recommend castor oil as very efficacious in expelling tape-worm, Tænia lata. Dr. A. T. Thomson says, "that exhibited per anum, in large quantity, I have found it very useful against the small thread worms, ascarides, which often infest the rectum." During dentition it is in general expedient to increase the frequency of the alvine discharge by artificial means, when there is much torpor of the bowels; and here castor oil is very useful. In colic, a drachm of castor oil, united with 15 drops of oil of turpentine, acts very efficiently.

The common practice of giving castor oil to the new-born infant is not only superfluous, but probably often injurious if the child be in a healthy state. It produces painful irritation of the bowels, and by straining them is liable to weaken their future natural action. Dr. Hamilton judiciously remarks that "the pernicious practice of giving purging medicines to infants as soon as they are born cannot be too much reprobated, for the retention of the meconium, for some hours after birth, certainly produces less inconvenience than is occasioned by the acrimony of the substances which the child is often forced to swallow."

If no evacuation take place within sixteen hours, then a teaspoonful of castor oil will be proper.

Dose and form of exhibition. Half a drachm to a drachm or two of fresh cold-drawn castor oil, blended with a little soft sugar, is the common dose for an infant. When the stomach is unusually delicate the oil may be made into an emulsion, with some aromatic water, by the intervention of mucilage, the yolk of an egg, or by honey, which at the same time assists its laxative operation. It may be also combined with syrup of roses or senna.

Dr. Fischer, of Prague, recommends rubbing the belly of children labouring under scrofulous enlargement of the mesenteric glands with a liniment composed of castor oil and tincture of colocynth. (Die Skropheln, Prag. 1832.)

³351.

R Ol. Ricini, 3j.
Magnesiæ ust., 3ij.
Sacch. albi, 3iij.
Ol. Anisi, gtt. ij.
Contere bene simul.

S. One or two teuspoonfuls repeated if required.—Eberle.

352.

R Ol. Ricini, zss. Syrup. Rosæ, zss. Vitelli Ov. Un. Tinct. Sennæ, 3iss.

M. Sit mistura.
S. One or two teaspoonfuls every hour for an infant.

353.

R Ol. Ricini, 3iij.—vj.
Pulv. Acaciæ, q. s.
Aq. Fæniculi, 3ij.
Mannæ, 3ss.
M. Fiat emulsio.

S. A dessert-spoonful repeated every hour until it operate.—Berends.

354.

R Ol. Ricini, 3iij.—3ss.
Ol. Terebinth. 3j.—3ij.
Tere cum Vitello ovi et
adde
Aq. Fæniculi, 3ss.—3ss.
Syrup. Papav.
Syrup. Rosæ, āā, 3ij.
M. Ft. mistura.

S. Let the third or fourth part be taken every three or four hours.—Copland.

ROSA. The petals of the Damask rose, Rosa centifolia, being slightly laxative, are sometimes administered in the form of syrup conjoined with cathartic medicines. Thus, syrup of rose, diluted with some thin gruel and given occasionally by teaspoonfuls, will often serve to bring away the meconium; and in disorders arising from constipation, a combination of the syrup with magnesia and dill-water, will be found an agreeable and gentle remedy.

SAGO. See AMYLUM.

SALVIA. Leaves of sage, Salvia officinalis, possess a slight degree of tonic power and astringency, in addition to the properties common to the aromatics. Sage is said to have been useful in checking the exhausting sweats of hectic fever; but its principal application is as a gargle in inflammation of the throat and relaxation of the uvula.

Dose and form of exhibition. An infusion of sage, made with about a tablespoonful of bruised leaves to a pint of boiling water, may be taken cold at bed-time, a few drops of dilute

sulphuric acid is a grateful adjunct.

As a gargle the infusion, prepared by an ounce of leaves to the pint of boiling water, is usually employed along with honey, alum, or vinegar. A useful collyrium in subacute ophthalmia is said to be prepared by adding some spirit to the infusion. In cases of obstinate intertrigo, Dr. Kluge, of Berlin, recommends (Rust, Magazin. Bd. 5) pledgets of lint imbued with a strong infusion of sage to be kept constantly applied to the parts.

355.

R Fol. Salviæ, Zj.
Infunde Aq. ferv., lb. j.
Digere per semihoram et
cola, Colatur.
frigefact. adde
Sp. Vini Gall., Zij.

S. Collyrium. - Andreæ.

356.

R Aluminis, 3j.
Solve in
Inf. Salviæ, 3vj.
Adde
Tinct. Lavand. Co., 3ss.
Syrup. Mori, 3vj.
M. Sit pro Gargarismate.

S. In atonic cynanche.

SALEP. Though not directed by our national pharmacopæias this substance deserves some notice, as it is frequently mentioned by writers on the materia medica; and in virtue of its mild, nutritive, and mucilaginous properties, may occasionally prove useful both in a dietetic and therapeutic point of view. The name is given to the prepared bulbs of the Orchis mascula and other species of the same genus. It belongs to the class of demulcent medicines, or those which abate the sources of irritation, afford a sheathing against acrimonious matters, and tend to allay the morbid sensibility resulting from organic or When, through disease, privation of fresh nervous reaction. nourishment, or the continued use of evacuant remedies, the natural mucus fails to be secreted, then the organs, deprived of their protecting covering, become much more sensitive, and the general nervous excitability is greatly augmented. therefore administered in cases of irritable cough and catarrh, in protracted diarrhea, in infantile atrophy. It is to be

observed, however, that the mucilage of salep, being a somewhat concentrated form of nutriment, is too rich for children reared by hand, and therefore inadmissible during the first months of existence.

The powder ought always to be well soaked in water and the

mucilage made not too thick.

Dose and form of exhibition. Internally salep should be given in the form of decoction only, as the powder when swallowed is apt to swell and annoy the stomach. Thus prepared it constitutes a mucilaginous vehicle for other medicines as manna, extract of henbane, aqueous tincture of rhubarb. It contains so strong a mucilage, that a scruple is sufficient to thicken 6 ounces of water. As an article of diet it may be taken along with milk, beef tea, and the like; in which case, a small teaspoonful of the powdered salep formed into a paste, with a tablespoonful of cold water, is to be stirred into a cupful of hot milk or soup, which may be spiced or not according to circumstances.

Salep is sometimes administered in the form of enema, a teaspoonful being mixed with cold then with hot water so as to amount in all to from 1½ to 3 ounces. To this half the yolk of an egg may be added. (Fränkel.)

SAPO. Soap, made of olive oil and soda possesses the properties of an antacid and laxative. From the mildness of its nature it cannot exert any direct deleterious agency upon the mucous membrane of the stomach, yet its protracted use is said to disorder the functions of digestion and assimilation. When acidity is connected with an imperfect and faulty secretion of bile, as frequently happens in cases of infantile colic, diarrhea, and dyspepsia, soap, from its power of improving the biliary secretion, may be occasionally of service. Hence, Kamper advises that children reared by hand, and troubled with acidity and its resulting ailments, should have a little soap mingled with their food; and Hufeland recommends, as an antacid and laxative for children more advanced, from 6 to 10 grains of soap dissolved in gruel morning and evening.

In this country soap is seldom prescribed alone, but not unfrequently in combination with rhubarb, the astringency of which it has a tendency to correct. In cases of poisoning by the mineral acids soap is given as an antidote, and should be 168 Sarza.

resorted to without a moment's delay, and its use continued until magnesia, the more appropriate counter-poison, can be procured.

Dose and form of exhibition. The dose of soap is from 5 to

10 grains, in the form of linetus or powder.

Dr. A. T. Thomson has seen much benefit derived from rubbing the tumid bellies of children in mesenteric fever, morning and evening, with a strong lather of soap.

357.

R Saponis. 9ss. Magnes. carb. Sem. Fœniculi, āā, 3ij. M. fiat pulvis.

S. Dose, half a teaspoonful occasionally .- Jahn.

358.

R Saponis, 9j. Cretæ præp. 3ss. Pulv. Acaciæ, 3j. Aq. Fæniculi, Ziij. Sacchari albi, 3ij. M. Sit mistura.

S. A teaspoonful frequently, shaking the phial each time. Frankel.

SAPO MOLLIS. Soft soap, made of olive oil and potash, in virtue of its powerful detergent and stimulant properties, has been employed externally with advantage in some chronic affections of the skin, more particularly porrigo scutulata or ring-worm of the scalp. A ready enema is prepared by dissolving some of it in water.

SARZA. Sarsaparilla, is the root of the Smilax officinalis. It is considered an alterative of morbid condition; but its mode of action is less evident than its ultimate effects. increase the secretion of perspiration and urine; and certainly possesses the power of improving the general state of the system, and imparting vigour to the constitution, when reduced by long-protracted disease.

Sarsaparilla has been prescribed with advantage in scrofula, more especially when affecting the digestive organs; and in cases in which there is a defective state of the cutaneous secretion. In the latter instance, after the employment of mercurial or other aperient alteratives, a course of sarsaparilla.

with warm bathing, will often prove beneficial. In scrofulous diseases of the joints, Sir B. Brodie recommends the combination of the sarsaparilla with alkaline medicines. That eminent surgeon directs 2 ounces of Jamaica sarsaparilla to be infused for twenty-four hours in a warm situation in 18 ounces of boiling water, to which 2 drachms of liquor potassæ and 1 drachm of bruised liquorice are to be added. Of this infusion, a quarter of a pint may be given twice daily to a child under five years of age, and double that quantity to an older child.

SCAMMONIUM. Scammony, is the gum resin of the convolvulus scammonea. It is an energetic cathartic, but apt to occasion griping and irritation of the mucous membrane of the bowels. It has been nevertheless prescribed with much advantage to children, in cases when the bowels are torpid or loaded with slimy mucus; but ought always to be given in combination with other purgatives, since while it promotes their action, its own harshness is thereby mitigated. In union with calomel and sulphate of potash, which modifies its griping qualities, it constitutes one of the best cathartics in worm cases. "One of the most effectual and yet mild purgatives that we are acquainted with," observe Drs. Evanson and Maunsell, "is a combination of rhubarb, scammony, and sulphate of potash, in equal parts, and to which an aromatic may be added." (Op. cit. p. 152.)

Dose and form of exhibition. The dose of scammony is from 1 to 5 grains, according to the child's age. Swallowed by itself it is apt to irritate the fauces, hence it should be given in emulsion with mucilage, sugar, honey, liquorice, or other bland substance; its disposition to gripe may be corrected by the addition of a drop of some volatile oil. Scammony may be also administered as a solution effected by trituration with a decoction of liquorice.

The compound powder and the confection of scammony are convenient preparations for children. The dose of the former is from 3 to 10 grains, that of the latter from 5 grains to a

scruple.

R Pulveris Scammonii, 3ss. Magnesiæ Carb., gr. xv. Pulv. Cinnam., gr. v.

M. Sit pulvis.

S. Two to six grains every three hours.

360.

R Pulv. Rhei.
Pulv. Scammonii.
Potassæ Sulph. āā, gr. x.
Bene tere simul et adde
Pulv. Aromatici, gr. v.

M.

S. Three to six grains every hour until it produce the desired effect.

Evanson and Maunsell.

SCILLA. Squill, the bulb of the Scilla maritima, is expectorant, diuretic, and in large doses emetic and purgative. As an expectorant it is used either in cases of deficient or of superabundant secretion from the bronchial membrane. In both instances it operates by stimulating the capillary vessels, and is, consequently, contraindicated during the existence of high inflammatory action, as in acute pneumonia and catarrh. Its employment is indicated in chronic bronchitis, particularly when the phlegm is viscid, the febrile heat having subsided. It is also useful in the sequel of hooping-cough.

As a diuretic it is prescribed in dropsy succeeding scarlatina, but is only admissible in the absence of general inflammatory excitement. As an emetic it is seldom ordered except in infantile croup or catarrh. Its use is contraindicated in the case of delicate sensitive children, or those whose digestive organs are weak. As a general rule the oxymel and vinegar of squill are more appropriate medicines for children than the substance

itself.

Dose and form of exhibition. Squill may be ordered internally in the dose of a quarter or half a grain every three or four hours in sugar along with bitartrate of potash, digitalis, &c. Wendt advises it to be given only at night in the dose of 2 or 3 grains. This practice is adapted to obstinate cases, in which the most powerful diuretic properties of the squill seem to be evolved after it has evacuated both upwards and downwards, the general result of a large dose. How can we reconcile this with Dr. Cullen's experience, that when the squill operates strongly on the stomach and intestines its

diuretic effects are less likely to huppen? Berndt and Meissner (Bemerkungen über das Scharlachfieber, Greifswald, 1827) speak favorably of the union of squill with cream of tartar, rendered more soluble by the addition of borax. (Tartarus boraxatus.) An infusion of squill, made with 10 grains to 6 ounces of water, may be administered by spoonfuls. (Fränkel.)

Huseland recommended an ointment containing squill as a useful discutient application to indurated glands, &c.; and a liniment of squill rubbed upon the region of the kidneys morning and evening has been found to promote diuresis in

hydropic ailments.

361.

R Scillæ.

Digitalis fol. āā, gr. iij.
Ol. Juniperi, gtt. vj.
Potass. Bitart.
Pulv. Glycyrrhiz., āā, 3j.
Pulv. Cinnamomi, gr. vj.
M. Ft. pulv. in xij. partes
æquales divid.

S. One thrice a day.
Fränkel.

363.

R Rad. Scillæ, Ziij.
Coque cum lixiv. caust. q.
s. ad mucilaginem.
Cola et adde
Adipis scillæ q. s. ut fiat
unguentum.

362.

R Scillæ, gr. iij.—vj.
Pulv. Cinnam. Co., 3ss.
Sacch. albi, 3iss.

M. Ft. pulvis in xij. partes æquales dividend.

S. One three or four times a day for a child from five to eight years of age.—Fränkel.

364.

R Potass. Bitart., 3j.
Potass, Sulphatis, 3iij.
Pulv. Scillæ, 3ij.
Antimonii Potassio-tart.,
gr. iss. M.

S. Give from 4 to 6 grains three or four times daily to a child of five years old.-Eberle.

SENEGA. Seneka, the root of the polygala Senega, is a stimulating expectorant and diuretic. In large doses it proves emetic and purgative. Dr. Lombard found it a valuable remedy in cases of irregularity of the functions of the heart; moderating increased action, as well as the consequent sanguineous

congestion in individuals suffering from the diseases of the heart, with dilatation of the cavities. (British and Foreign Medical Review, vol i. p. 264.) Although appearing to influence more or less all the secretions, still is its action especially directed to the lungs, and its expectorant virtues are those for which it is principally esteemed.

Seneka has been recommended as a remedy in the following

diseases of infancy:

1. Croup. By Dr. Archer, of Maryland, it was first administered in this affection. He ordered it in the early stages along with calomel, and found it act favorably when cough, vomiting, and after two hours expectoration of viscid phlegm and pseudo-membraneous concretions ensued. exhibited a strong decoction (made by boiling half an ounce of the root in 8 ounces of water down to 4 ounces) in the quantity of a teaspoonful or a tablespoonful, according to the age, every half-hour; but when the decoction could not be readily procured, he gave the powdered root in the dose of 4 or 5 grains. Although seneka be unquestionably a very useful medicine in certain states of this alarming affection, it is very far from possessing the powers originally ascribed to it by Archer and other physicians. At the commencement of the complaint, in violent cases, it is objectionable on account of its excitant properties; but after the general and local inflammatory action has been to a considerable degree mitigated, or the disease has lost its acute character or assumed a chronic form, it is often highly beneficial. "When a dry and hoarse cough, with a slight difficulty of breathing, remains," says Dr. Eberle, "after the inflammation has been subdued, the polygala will in general prove more useful than any other remedy we possess. In all chronic croupy affections, and in the catarrhal sequelæ of this and other chronic affections of the respiratory organs, it is a remedy of very excellent powers." (Op. cit. p. 362.)

Again, where we have to treat wan, withered, scrofulous children, in whom the eyes are dull and heavy, the skin cool and dry, the varying pulse without hardness, and the urine, instead of being red, watery, Sachse says we may resort to seneka in the first instance with the best effect. Dr. Stieglitz judiciously observes "physicians have always before their eyes, in the advanced stages of croup, the exudation only, regarding

merely the mechanical hindrance torespiration. Unfortunately when the disease has advanced far, and there is extensive pseudomembraneous formation, but little can be done to relieve the oppressed breathing. But by studying the course of bronchial affections attended with fever, we learn that the transition from inflammation to debility bordering on paralysis of the functions of respiration is prompt and imperceptible. This observation applies to croup as well as to its congener bronchitis. There must therefore be a certain period in its treatment at which it is absurd and injurious to think of subduing inflammation by bleeding and exhibiting mercurials; the stage of inflammation is past. Not only must we cherish the vital powers but we must obviate approaching debility and impending paralysis. Here will musk, senega, and camphor avail.' (Hallesche allgemeine Literaturzeitung, 1810.)

2. Polygala has been found peculiarly useful in peripneumonia notha after sufficient depletion. In acute bronchitis, after the febrile action has been moderated if there be much secretion into the bronchia, the combination of polygala, squill, and ammoniacum frequently produces a very good effect; in the advanced stages of hooping-cough, also, when there is great accumulation of mucus in the bronchia, impeding respiration, the union of polygala with antimonial wine is greatly extolled

by Wendt.

Dose and form of exhibition. It is not advisable to give the seneka in powder, as it is somewhat nauseous and apt to provoke vomiting; (croup is here an exception, as the latter result is at times desirable when the air tubes are much loaded, and the strength inadequate to cough up their contents,) when so given the dose is from 2 to 5 grains every hour or two in mucilaginous mixture. The German physicians order it with calomel or with musk and calomel. The preferable form is that of decoction, taken along with muriate, acetate, citrate, or carbonate of ammonia, antimonial wine, oxymel of squill, or James's powder. An ounce of the root to a pint of boiling water, simmered down to about 12 ounces and sweetened with honey, forms a suitable preparation. From 1 to 2 or 3 teaspoonfuls of this decoction should be given every hour or two, according to the age of the child and the severity of the symptoms.

Syrup of gum or marsh-mallows is useful for abating its acrid properties. The following formula for syrup of seneka is from

the pharmacopæia of the United States. "Take of seneka bruised 4 ounces, water a pint, sugar (refined) a pound. the water with the seneka to one-half and strain; then add the sugar and boil so as to form a syrup." It may be ordered in the dose of 1 or 2 drachms. The compound honey of squill, commonly known by the name of Coxe's Hive Syrup, combines the virtues of seneka, squill, and tartar emetic, of the last of which it contains I grain in every fluid ounce. According to Drs. Wood and Bache (Op. cit. p. 900) it is emetic, diaphoretic, expectorant, and frequently cathartic; and may be given with advantage in mild cases of croup, in the latter stages of severe cases, when the object is to promote expectoration, and in other pectoral complaints in which the same indication is presented. The dose is from 10 drops to a teaspoonful, according to the age, and should be repeated in cases of croup every fifteen or twenty minutes till it operates.

365.

R Dec. Senegæ, ʒj. Liq. Ammon. Acet., ʒss. Syrupi Scillæ, 3ij. Syrupi Papav. alb., 3ij. M.

S. One or two teaspoonfuls every third hour.

Evanson and Maunsell.

366.

R Dec. Senegæ, ʒij.

Ammoniæ Sesquicarb.,
gr. iij.
Tinct. Cinnam. Co.
Syrup. Tolut. āā, ʒij.
Syrup. Papav. albi, ʒij.
M.

S. One to two teaspoonfuls every two hours.

Evanson and Maunsell.

367.

R Infus. Senegæ, 3iv.
Syrup. Ipec., 3j.
Oxymell. Scillæ, 3iij.
Antim. Tart., gr. ss. M.

S. Take a tablespoonful every fifteen minutes, until vomiting is produced, in croup. Jadelot. 368.

R Ammoniaci, Əij.
Infus. Senegæ, Ziv.
Syrup. Scillæ, Zss. M.

S. Dose, a teaspoonful every two hours in advanced stage of bronchitis.—Eberle. 369.

R Scillæ.

Polygalæ Senegæ, āā, ℥j.

Aquæ, lb. j.
Mellis despum., lb. ss.

Ft. Syrupus quæque unciæ cujus addatur.

Antimonii tartarizati granum.

S. Dr. Coxe's Hive Syrup.

370.

R Rad. Senegæ.

Calomelanos, āā, gr. ij. Sacch. albi, Əss.

M. Ft. pulv. dent tal. dos., No. vj.

S. One powder to be taken hourly in syrup of seneka; in cases of croup.—Sachse.

371.

R Rad. Senegæ, 3ss.

Inf. in s. q. Aq. fervid. per ½ hor Colatur, Ziv. adde

Ammoniæ Hydrochloratis, 3ss.

Syrup. Althææ, Zj. M.

S. A tablespoonful every two hours for an infant.

Wendt.

372.

R Rad. Senegæ, 3ss.—3j. Coq. c. Aq. fervid., 3vj. ad Colatur, 3iv. adde Vin. Antimon., 9ij.—3j. Syrup. Althææ, 3j. M.

S. A tablespoonful every second hour.—Wendt.

373.

R Rad. Senegæ.

— Glycyrrhizæ, āā, 3ij. Coq. c. Aq fervid., ǯviij. ad remanent., ǯiv. Colatur,

adde

Ammoniæ Hydrochloratis, 3j. Syrup. Rhœados, 3j.

S. A dessert-spoonful every hour for a child of two years and a half in croup.—Sachse.

SENNA. Senna, is the leaves of the Cassia lanceolata. It is a prompt and efficient cathartic, well calculated for fevers and febrile complaints, in which a decided but not a violent impression is desired; and for the purpose of removing mucous

sordes from the first passages of phlegmatic torpid children, or of such as are troubled with worms. It is generally given in union with other aperients as manna and various salts, as bitartrate of potash, tartrate of potash, or sulphate of magnesia, and some aromatic adjunct. As the powder is inconvenient from its bulk, senna is usually prescribed for children in the form of electuary or infusion. It is said that if you digest a drachm of senna leaves in a sufficient quantity of cold water for a night, and with the strained liquor prepare coffee in the morning, you obtain an efficient purgative potion devoid of any nauseous taste; the same cold infusion may be given in milk. (Bulletin Therapeutique.) The dose of the former is from half a drachm to 2 drachms, for that of the latter, see Infusum Senne Compositum. I subjoin some formulæ for the administration of senna according to various continental authorities.

374.

R Fol. Sennæ, 3j.

Inf. in s. q. Aq. per ½
hor. in colatur, 3iss.,
solve.

Mannæ, 3iij.
Syrup. Rhei, 3iss. M.

S. A dessert-spoonful every two hours for a child of two years.—Fränkel.

375.

R Fol. Sennæ, 3ij.
Sem. Anisi, 3j.
Inf. Aq. fervid. q. s.
Colatur, 3iv., adde
Pulp. Tamarind., 3ss.
Sacch. albi, 3ij. M.

S. A dessert-spoonful, after being well shaken, every hour or two for a child of three or four.—Fränkel.

376.

R Fol. Sennæ, 3j.
Rad. Rhei, 9j.
Inf. Aq. fervid. q. s.
diger. per ¼ hor. in
colatur, Ziij. solve
Mannæ, Zss. M.

S. A tablespoonful every hour till it operates.—Radius.

377.

R Fol. Sennæ.
Rad. Rhei, āā, 3ij.
Inf. Aq. fervid. q. s. digere per ¼ hor. in colat.,
3iv. solve
Mannæ, 3j.
Magnesiæ Sulph., 3ij. M.

S. A dessert-spoonful every hour.—Wendt.

SERUM LACTIS. Whey, is the fluid part of milk, obtained by separation of the curd and oil. It contains the saccharine principle, and is an article of the materia alimentaria rather than of the materia medica. As such it is occasionally used in the artificial rearing of children; but chiefly during the first few days after birth. It is less nutritions than the milk itself, but is again less exciting to the vascular and nervous systems. Fränkel says that as it exerts a mild laxative effect it supersedes the necessity for the colostrum or first maternal milk; but it should not be long continued, as it is but inadequate food for the infant when somewhat advanced. Hufeland directed whey to be prepared in the following manner: soften a calf's stomach in vinegar, then inflate and dry it, in which state it will keep a long time. Of the stomach or rennet thus prepared, a small stripe is sufficient to coagulate a large quantity of milk. The whey is prepared by macerating the portion of the rennet for a couple of hours in a cupful of water, and then pouring the whole into a quantity of skim milk, which should afterwards be submitted to a gentle temperature but not boiled. Ere long a curdy pellicle forms, which is to be broken down and the whey allowed to run off. The resulting whey is characterized by being perfectly pure and pellucid; by being obtained without any boiling, thus retaining the light particles; and by being free from all trace of acidity.-Fränkel.

SERPENTARIA. Serpentary, the root of Aristolochia serpentaria, is a stimulant tonic, augmenting the energy of the vascular system, promoting the functions of the skin, resembling in these respects the action of camphor. It is admirably adapted to those cases in which the system requires support, but is unable to bear active excitation. Thus, in exanthematous diseases, in which the eruption is tardy or has receded, the grade of action low, and putrescence impending, it is considered highly beneficial. Serpentary, alternated with camphor, may be prescribed either alone or combined with the decoction or extract of Peruvian bark or with sulphate of quina. Too largely taken it occasions nausea, griping pains in the bowels, and sometimes dysenteric symptoms.

Dose and form of exhibition. The infusion is generally preferred, and is prepared with from 1 to 2 drachms to 4 or 6 ounces of water. The dose of this is a tablespoonful every two

or three hours.

378.

R Rad. Serpentari., 3iss.—

Inf. in s. q. Aq. per ½ hor. Colatur, Ziv. refriger.,

Sp. Æther. sulph., 9ij. Syrup. Aurantii, Zj. M.

S. A tablespoonful every second hour.—Fränkel.

379.

R Cort. Cinchon. fusc., 3ss. Coq. cum Aq. commun. 3xiij. sub finem cot. infunde

Rad. Serpentariæ, 3ij. Ad. Colatur, 3vj. cui adde Syrup. Aurantii, 3j. M.

S. A tablespoonful hourly. Fränkel.

380.

Rad. Serpentar., 3ij.
Inf. Aq. fervid. q. s. per
½ hor. in colatur, 3iv.
solve
Extracti Cinchonæ, 3j.—
Syrup. Aurantii, 3j. M.

S. A tablespoonful every two hours.—Fränkel.

381.

R Rad. Serpent., 3vj.
Aq. Comm. ferv., 3viij.
Infunde per horas iv. vase
clauso et cola.
Colatur refrig. adde
Sp. Æth. sulph., 3j. M.

S. A dessert-spoonful every hour.

SIMARUBA. Simaruba, is the bark of the root of the Simaruba officinalis. It operates simply as a tonic, and is occasionally beneficial in relaxed and debilitated states of the alimentary canal. It is not compatible with the alkaline carbonates; but a useful compound in protracted cases of diarrhœa is a combination of simaruba, nitric acid, and opium; a prescription, it is said, of the late Dr. Baillie.

382.

R Infus. Simarubæ, Ziss.
Acid. Nitrici dil. gtts. iv.—gtts. vj.
Syrup. Aurantii, 3iv.
Tinct. Opii, gtts. vj. M.

S. One or two teaspoonfuls of this mixture to be given in any bland fluid three or four times a day.

SINAPIS. Mustard, the seeds of the Sinapis nigra, is seldom or ever administered inwardly as a medicine to children. A German physician, named Thilow, however, recommends 1 or 2 teaspoonfuls, according to the age, of a mixture of an ounce of oxymel of squill with a drachm of mustard seed, given every hour as a sort of specific in hooping-cough. (Allgemeine

Mediz. Annalen, 1817.)

But mustard is most valuable as a rubefacient. Mixed with tepid water, and applied in the form of a cataplasm, it stimulates the cutaneous capillaries, and from the intimate relation subsisting between the skin and internal parts may influence more or less the whole system. By sympathy of communication it may augment the vitality of subjacent textures; or, as a counter-irritant, serve as a derivative from important organs. Hence sinapisms are employed for the following indications.

1. For obviating diminished vital power in the cutaneous organ, as in exanthematous diseases, namely, small-pox, scarlatina, measles, &c. where, from this very cause, the eruption is either imperfectly developed, or recedes; and also in retrocedent rheumatism, erysipelas, chronic affections of the skin. Here the site of application is indefinite; and the sinapisms may be placed in succession over various parts of the surface; were, however, the repelled disorder quite topical, then the rubefacient should be directed to the previously affected part.

2. For determining sympathetic irritation in a remote part, as in cases of paralysis. Here the rubefacient is to be directly

applied to the suffering extremity.

3. For exercising an antagonism over other parts, as in the instance of phlegmasiæ, congestions, catarrhal or rheumatic

affections, diarrhœa, spasms, colic, &c.

In such, sinapisms produce a soothing effect, and constitute invaluable palliatives. Hufeland thus observes, "I have repeatedly, in the most violent convulsions, febrile heats, difficult breathing, and in the stupor and wandering of children, applied them to the calves of the legs, and, within half an hour, they have acted as beneficially as the best cooling and antispasmodic remedies: the head became relieved, the respiration easy, the convulsions gradually abated, and the burning heat was succeeded by a genial perspiration over the whole surface. I was in the habit of employing them in such cases a quarter or half an hour previous to the exhibition of emetics, to counteract cerebral con-

gestion and whatever disadvantage might attend the operation of vomiting, under such circumstances—the very purpose for which enemata are sometimes ordered; these, however, have this inconvenience, that they invert the action of the emetic." The time for their employment should in all such cases be regulated by the state of general susceptibility, lest the excitement be diffused beyond the prescribed limits, and so aggravate the evil. Hence, only when individual parts are prominently affected, others remaining undisturbed, ought we to resort to sinapisms. The continental writers recommend that the site of application be as much as possible in antagonism with the affected part; this, as a general rule, is referrible to the skin. Thus, in delirium, violent headach, and cerebral irritation generally, rubefacients are to be placed on the soles of the feet, but are these highly sensitive, on the calves of the legs; in internal phlegmasiæ, on the external surface corresponding thereto; in obstinate vomiting, upon the pit of the stomach;

in spasmodic asthma, on the breast.

Soon after the sinapism has been placed on the skin, it produces redness, with a burning pain, which ere long becomes insupportable. When a speedy impression is not desired, especially when the sinapism is applied to the extremities, the powder should be diluted with an equal portion of rye-meal or wheat-flour. Care should be taken not to allow the application to remain too long, as vesication with obstinate ulceration and even sphacelus may result. caution is particularly necessary in the case of children, and still more when the child is insensible, as the degree of pain can afford no criterion of the sufficiency of the action. of the sinapism varies according to the effect intended, from that of a half-crown to the flat of the hand. The time of application must depend on individual sensibility; in general from fifteen to twenty minutes is long enough for children. The application should be carefully watched, and for the reasons above assigned, withdrawn so soon as the skin is tolerably red. The effect will be mitigated in highly irritable children by interposing a piece of gauze. After its removal the part may be left exposed, or should the pain be very lively, smeared over with fresh cream or any bland liniment.

Fomentations made with infusion of mustard belong to the most efficient means of quickening the cutaneous capillaries, and awakening a new and potent reaction in the exhausted organism in diseases accompanied with extreme debility, retrocedent exanthemata and the like. Infuse mustard for a quarter of an hour, and imbue flannels with the infusion: envelope the child in them.

Mustard is sometimes used to render poultices more active. Thus Rosenstein recommends in croup to reduce 3 ounces of the flour of marsh-mallow (Malva) to a pulp by boiling in hot water; and after the decoction is finished to add a couple of drachms of pounded mustard, and then place it as a poultice about the neck.

For foot baths, an ounce of pounded mustard being scalded with boiling water, the whole is to be poured into the bath. When the baths cannot be readily prepared, the feet may be well rubbed with a strong infusion of mustard, or flannel cloths dipped in it may be wrapped round them.

SODÆ CARBONAS.

SODÆ SESQUICARBONAS. These compounds of soda, with carbonic acid, possess antacid and diaretic properties. The former has been found preferable in hooping-cough, scrofula, and bronchocele. In the latter disease, Dr. Peschier, of Geneva, considers it more efficacious than even iodine itself. But in the treatment of infantile diseases, the ordinary carbonate has been in a great measure superseded by the sesqui-salt, which, having medical properties similar, proves more acceptable to the palate and stomach from its mild taste; while its excess of acid does not interfere with its action as an alkaline remedy. From its higher neutralizing power, indicated by the lower atomic weight of its base, it may be reckoned preferable to the bicarbonate of potash.

The carbonates of soda exert a decided sedative influence upon the gastro-intestinal mucous membrane, and at the same time alter and improve its secretions. They also regulate the peristaltic action. Dewees informs us that a grain of soda, administered every fifteen minutes until 10 grains were taken, succeeded in removing torpor of the bowels, occurring in a new-born infant. A grain of the sesquicarbonate, in conjunction with 4th of a grain of Dover's powder, given every three or four hours, is an excellent remedy for allaying the irritation and exhausting diarrhæa which sometimes occur in

the advanced stage of infantile jaundice: and in chronic cases of the same disease considerable advantage may sometimes be gained from the combination of this salt with extract of Dandelion. "Ten grains of the extract," observes Dr. Eberle, "dissolved in about a teaspoonful of warm water, together with 2 grains of the soda, may be given three times daily. It generally keeps up a regular action of the bowels, excites the urinary secretion, and appears to produce a salutary effect upon the biliary organs and general capillary system, as may be inferred from the gradual subsidence of the abdominal fulness and tension, and the disappearance of the yellowness of the

skin under its use." (Op. cit. p. 108.)

The connexion between acidity of the stomach and bowels and urinary affections is very great. Hence, in dysuria, if the urine be red, and deposit, on standing for some time, the lateritious sediment, about 3 grains of the sesquicarbonate in a teaspoonful of weak infusion of calumba, diluted with some barley-water, gruel, or other mucilaginous drink, given twice or thrice daily, serve to correct the secretion of lithic acid by the kidneys and procure speedy relief. Dr. Prout observes that "children in general, and especially the children of dyspeptic and gouty individuals, are exceedingly liable to lithic acid deposits." In such cases it should be constantly borne in mind that, by proper precautions, the formation of stone in the bladder may almost certainly be prevented; but by inattention this dreadful affliction is assuredly likely to visit the child. When, on the other hand, incontinence of urine is associated with a predominance of lithic acid, this salt should be resorted to along with laxatives and other suitable means for improving the digestive and hepatic functions.

In flatulent colic attended with acidity, a solution of soda in infusion of valerian is favorably mentioned by Dr. Eberle. Twenty grains may be dissolved in 2 ounces of the infusion, (made by macerating an ounce of the root in a pint of water for about twenty-four hours,) to which 2 or 3 drachms of syrup of ginger may be added. A teaspoonful of this solution may be given several times daily to an infant of from one

to three months old.

In vomiting connected with a dyspeptic state of the stomach, soda, dissolved in very dilute infusion of calumba, has been exhibited with prompt and complete advantage: and in chronic diarrhœa, accompanied with acidity in the first passages,

a solution in a weak infusion of hops, conjoined with mucilaginous diet and a warm plaster over the abdomen, acts beneficially. It seems to equalize the peristaltic action, and to improve the character of the evacuations. If the skin be dry and harsh, it is better combined with the compound powder of ipecacuanha or ipecacuanha itself. Administered in the form of enema it relieves tenesmus.

In various affections of the bronchial membrane, soda exercises a salutary influence; diminishing the viscidity of the phlegm, and consequently promoting its excretion. Hence its utility in the advanced stages of bronchitis and hooping-cough.

From the intimate sympathy subsisting between the skin and mucous membranes, soda, like other alkalis, is useful for abating cutaneous irritation; hence it relieves urticaria or nettlerash. In crusta lactea, where much sallowness, languor, and emaciation have come on, it has been employed with advantage in union with sarsaparilla, decoction of lichen, or some light bitter. The combination of soda and rhubarb is an excellent remedy in acne and in scrofulous eruptions, as porrigo scutulata, or ring-worm.

Dose and form of exhibition. The dose of the dried carbonate of soda (carbonas sodæ exsiccata) is from half a grain to 2 or 3 grains, twice or oftener in the day, taken in some bitter infusion; that of the sesquicarbonate from 1 or 2 grains to a scruple frequently repeated. The sesquicarbonate of soda is a useful adjunct to magnesia where much acidity prevails, and when large doses of that earth would be apt to relax the bowels. Should some stimulus be required to favour the expulsion of the elastic gaseous contents of the stomach, a little ammonia may be added to the above combination. Under similar circumstances, namely, superabundant production of acidity in the first passages, should carbonate of iron or mercury with chalk or with blue pill be prescribed, the addition of soda will tend to obviate the astringent effect of the iron and the irritant effects of the mercury. Lozenges made with sugar, gum, and containing 1sth of their weight of this salt are a convenient form of administration to children. 383.

R. Aq. Menth. p., Ziss. Sodæ Sesquicarb., Dij. Syrupi Croci, Zss. M.

S. A teaspoonful frequently in hooping-cough.

384.

R Sodæ Sesquicarb., gr.iss. Pulv. Rhei, gr. iij. Pulv. Valerian., gr. j.

м.

S. A powder to be taken, thrice a day, by infants subject to flatulent colic.

SODÆ PHOSPHAS. Phosphate of soda, is a mild purgative, and from its pure saline taste well adapted to the cases of children. For this elegant addition to our pharmaceutical preparations we are indebted to the late Dr. Pearson. The dose is from a drachm to half an ounce, and is best given in gruel or light broth, to which it communicates a taste as if simply seasoned with common salt.

SODÆ POTASSIO-TARTRAS. Tartarized soda, or Rochelle salt, is a mild cooling aperient, well adapted for children, as being among the least disagreeable of the neutral salts. It is not incompatible with tartar emetic, and may therefore be associated with that salt in solution. It is a common adjunct to infusion of senna, rhubarb, &c. The dose is from half a drachm to 2 or 3 drachms, according to the age.

SODÆ SULPHAS. Sulphate of soda, known commonly as Glauber's salt, is in large doses cathartic, but in small doses, largely diluted, aperient and diuretic. It is much less used in this country than formerly, having been almost wholly superseded by the less unpalatable sulphate of magnesia. Although sanctioned by the authority of continental physicians of repute, it is not well suited as a medicine for children, inasmuch as it is apt to overpurge and induce violent, watery, debilitating diarrhæa, without completely evacuating morbid accumulations from the bowels. It is only admissible as a means of purgation and derivation, in the case of robust plethoric individuals labouring under inflammation.

Dose and form of exhibition. Sulphate of soda may be

ordered in solution in the dose of from two scruples to a drachm or two. It is generally given along with the compound infusion of senna, manna, &c. Its nauseous taste is most readily disguised by the admixture of a little syrup of lemon-juice or cream of tartar.

Attention should be paid to intermit the medicine, so soon as it has operated moderately, for fear of irritating the bowels, and occasioning exhausting watery discharges. In this way,

the medicine may be safely repeated from day to day.

385.

R Infus. Sennæ Co., Ziij. Sodæ Sulphatis, 3vj. Syrupi Limon., Zj. M. Fiat mistura.

S. To children from one to two years old a dessert-spoonful, and for those somewhat older a tablespoonful, every two hours.—Fränkel. 386.

R Mannæ, ʒij.
Sodæ Sulph., ʒi.
Solve in
Aq. Destill., ʒvij. M.

S. To be given by spoonfuls. Frankel.

SODII CHLORIDUM. Chloride of sodium, or common salt, in small doses acts as a stimulant tonic, in larger doses as a purgative. It promotes digestion, and the almost universal animal appetency for it, proves it to be a salutary stimulus in health. By giving greater tone to the digestive organs in weakly children, it corrects the disposition to generate worms. Rivin recommends as an anthelmintic remedy, in the case of ascarides, a spoonful of salt swallowed in the morning fasting.

Externally applied in solution, common salt is a topical stimulant, and may be used either locally or generally as

follows:

1. As an ingredient in stimulating enemata; in the proportion of from a teaspoonful to a dessert-spoonful in infusion of chamomile and oil. Dewees extols, as a means of relieving irritability of the stomach in infantile cholera, enemata composed of 3 teaspoonfuls of salt in 3 ounces of water. From this simple treatment he has obtained excellent results in a

great number of cases. The admixture of half a drachm or a drachm of tincture of aloes is proper in worm cases.

2. As a lotion; a solution of salt is a good stimulant application to edematous swellings of the scalp in new-born infants.

3. Flannel bags of hot salt are recommended in croup by Mr. Kirby, of Dublin. The hot salt thus incased is made to surround the child's neck, and is renewed whenever it gets cool; the child, if at the same time carefully covered up, soon breaks out into a general perspiration. The remedy operates chiefly as a rubefacient on the surface of the affected part.

4. Salt-water baths are of remarkable efficacy in scrofulous diseases; they stimulate the sluggish lymphatic and glandular systems, and invigorate the whole organization. The quantity

of sea-salt for a bath is from 1 to 4 pounds.

I would briefly point attention to another therapeutic preparation aliied to the above, namely, the compound of soda and chlorine, the liquor sodæ chlorinatæ. A few drops given internally, repeated three or four times a day, have been found beneficial in gangrenous aphthæ; in cases of muguet, M. Guersent recommends a drachm of the solution to the pint or half pint of barley-water; and in scarlatina maligna, with sloughing or ulceration of the fauces, Dr. A. T. Thomson recommends a gargle composed of 12 drachms of the chlorosodaic solution to $5\frac{1}{2}$ ounces of water and $\frac{1}{2}$ ounce of honey.

SPIGELIA. The root of *Indian-pink*, Spigelia marilandica, is a powerful anthelmintic, and as such extensively used in the United States. Its vermifuge properties were first learned from the Cherokee Indians. In an overdose it determines to the brain by over excitement of the circulation, giving rise to vertigo, dimness of vision, dilated pupils, spasms of the facial muscles, and sometimes, according to Drs. Wood and Bache, to general convulsions. But the narcotic effects are said to be less apt to occur when the medicine purges, as it often does, and to be altogether obviated by combining it with cathartics. Judiciously administered it has never yet been known to produce bad consequences.

Dose and form of exhibition. Spigelia may be given in substance or infusion. The dose of the powdered root, for a

child of three or four years old, is from 10 to 20 grains, to be repeated morning and evening and followed by a brisk cathartic. The infusion is the most common form of exhibition, and it is usually conjoined with senna or some other cathartic, to ensure its action on the bowels.

Dr. Eberle's plan of management for the expulsion of the lumbricoid, or long round worm, is to put the patient on a liquid diet, and to order him a small dose of Epsom salts every morning for three or four days. On the fourth morning he directs a decoction of the root of spigelia, in the proportion of an ounce of the root to a pint of water, boiled down to half a pint. This, being sweetened, is to be drunk in the course of three or four hours, by a child of from five to ten years old, commencing in the morning after having taken a little milk and water into the stomach. As soon as the whole of the decoction is taken, an active dose of calomel and jalap is to be administered, or a dose of castor oil and turpentine, in the proportion of half an ounce of the former to 2 drachms of the latter, given in doses corresponding to the age of the patient. (Op. cit. p. 265.)

In order to form a syrup of spigelia, Dr. Noverre, of Martinique, directs five parts of the plant (root and flowers) to be boiled for an hour with ten parts of water. The decoction is permitted to stand till the following morning, when it is strained, sweetened with sugar, and concentrated by heat to the consistence of syrup. Of this syrup a quantity, proportioned to the age of the patient, is taken for three or four evenings in succession, and followed by a dose of castor oil. (Journ. des

Connaiss Med., 1835.)

387.

R Spigeliæ, 3ss.
Sennæ, 3ij.
Mannæ, 3j.
Fæniculi, 3ij.
Aq. bull., 3j.
Macera per horam in vase
leviter clauso et cola.

S. A wine-glassful to be given, to a child from two to four years old, three or four times a day.—Wood and Bache.

SPIRITUS AMMONIÆ AROMATICUS. The aromatic spirit of ammonia, is stimulant and antacid, and is perhaps the best form for administration to children. Its use is indicated where flatulence is present with acidity; in aphthæ, when gangrene is either imminent or has already commenced; in the advanced stages of infantile erysipelas; in hydrencephaloid disease; and in convulsions symptomatic of nervous exhaustion, especially if that be connected with pain and irritation of the bowels.

The Germans have an officinal preparation, called "liquor ammonii anisatus," which is almost equivalent to the above. They prescribe it for children in the following ailments:

- 1. In pulmonary catarrh, when the breathing is laborious from accumulation of phlegm in the bronchi.
- 2. In dyspnœa, with predominant weakness and spasm, as a means of determining to the skin.
- 3. In cases of pain and convulsions consequent upon suppressed perspiration, indicating some derangement of the sensibility, provided there be no gastric irritation present.
- 4. In flatulent spasmodic colic, without any disorder of the bowels, combined with a minute quantity of laudanum, as a carminative and antispasmodic.

I annex some of their formulæ, substituting our officinal preparation for theirs.

Dose and form of exhibition. The aromatic spirit of ammonia may be given in the dose of from 2 to 10 minims, in any aromatic water, repeated more or less frequently, according to the urgency of the case. In a case of fits, arising plainly from exhaustion, 5 drops of sal volatile may be given in water; light nourishment may be added; the feet fomented, and the recumbent posture preserved. Combined with magnesia it constitutes an excellent remedy in colic and constipation. Externally it is employed with benefit as a volatile embrocation to the spine, the ribs, palm of the hands, and soles of the feet, in cases of convulsions arising from debility and languor.

388.

R Sp. Ammon. Arom., 3ss. Syrup. Althææ. Aq. Fæniculi, āā, ℥j. M. Sit mistura.

S. A teaspoonful every hour for an infant.—Fränkel.

389.

R Sp. Ammon. Arom., 3j. Aq. Fæniculi. Syrup. Althææ, āā, ₹j. Antimonii Oxysulph., gr. iv.

Tinct. Opii, gtt. vj. M. S. A teasnoonful, after beins

S. A teaspoonful, after being well shaken, every hour for a child of two years.—Fränkel.

390.

R Sp. Ammonia Arom., 9j. Extr. Hyoscyami, gr. iij. Syrup. Althæe, 3j. M.

S. A teaspoonful thrice a day, in chronic pulmonary catarrh, in flatulence, and in the last stage of hooping-cough, for a child of from three to five years old.

L. W. Sachse.

391.

R Sp. Ammon. Arom., 3j. Sp. Lavand., 3jj. M. Sit mistura.

S. To be used as an embrocation for the relief of hiccup.
Siebold.

SPIRITUS ARMORACIÆ COMPOSITUS. The compound spirit of horse-radish, is employed on account of its stimulant and aromatic properties, as a topical application in aphthous and relaxed conditions of the inside of the mouth.

392.

R Spiritus Armoraciæ Co., Ziiss.
 Succi Limonum.
 Mucilag. Seminum Cydon.
 Syrup. Mori, āā, Zss.
 M. Sit linctus.

S. To apply in malignant aphthæ.—Starke.

SPIRITUS VINI. Alcohol, is a very powerful diffusible stimulant. More or less diluted it is frequently employed externally for the purpose of rousing the sensibility, promoting the functions of the skin and the general circulation. fomentation, made by wrapping the body in a piece of thick flannel wrung out of hot whiskey or brandy, is very useful for re-exciting the vital powers in the case of death-like syncope attacking the new-born infant. The child's face should be, at the same time, gently washed with a very weak mixture of warm spirits and water. In certain forms of convulsion, and other diseases attended with extreme languor and debility; more especially when it is our object to determine to the surface of the body, this method will be found very efficacious. Thus, in confluent small-pox, where the recession of the eruption could not be averted by musk and opium, when the patient lay without consciousness, the pulse hardly perceptible, the breathing rattling and suspirious, the eruption has been reestablished by its adoption, and life saved. All exposure to cold must be carefully guarded against: it is therefore proper to renew the flannel as soon as it has parted with its heat. the case of sanguineous tumors of the scalp, the result of violent pressure during parturition, a spirit lotion is the best discutient. Weitsch (Hufeland's Journal) recommends, in the incipient stage of spinal incurvation, frictions to be made along the whole length of the spine, morning and evening.

Spirit of wine is frequently applied to produce cold by evaporation, as in cases of active cerebral congestion, and is a

principal ingredient in most refrigerant lotions.

In the form of brandy it constitutes a valuable remedy in diseases characterized by sinking of the vital powers.—Thus, if an infant has had diarrhœa, or if it has been bled by leeches, or if without these its cheeks are pale and cool; and if under these circumstances it be seized with symptoms of affection of the head, such as stupor resembling coma, dilated pupils, the eyes remaining open and insensible, the countenance pallid and the pulse feeble, this affection may be the effect of exhaustion. And if it be the effect of exhaustion, the cordial and soothing plan of treatment will alone succeed. The child should have 10 drops of brandy, every two or three hours, in a little gruel, to be continued along with light nutritious food, until the coldness and appearance of exhaustion subside. The same practice is required in the sinking stage of typhoid remittents.

SUCCINUM. The oil of amber, oleum succini, is stimulant and antispasmodic, and occasionally promotes the secretions, particularly that of the urine. It has been given with advantage in hooping-cough and convulsions from intestinal irritation, but is now scarcely ever used. The dose is a few drops diffused in some aromatic water by the intermediation of sugar and mucilage. Externally applied as a liniment, it is strongly recommended in the latter affection by Dr. Parrish, of Philadelphia. He directs it to be rubbed along the spine, mixed with an equal measure of laudanum, and diluted with three or four parts of olive oil and of brandy.

A solution of the *succinate of ammonia* is extensively employed by the German practitioners as a potent and efficient antispasmodic for children. It is considerably milder in its properties than the other ammoniacal preparations; and as a diaphoretic increases the cutaneous secretion without heating the patient. Its use is indicated in exanthematous disorders, when the eruption is backward or threatens to recede; in pectoral affections, when expectoration is hindered by atony and spasm; and in convulsions, determined by checked perspi-

ration, flatulence, acidity, &c.

As a remedy in convulsions it may be safely given to the youngest infant; it being previously ascertained that these are independent of cerebral congestion. It is said to act beneficially in the *trismus nascentium* or "nine day fits;" as also in hooping-cough, when the skin is in a dry and harsh condition.

The dose of the solution (liquor ammonii succin.) is from 2 to 10 drops, alone or combined with musk, opium, &c.; its operation may be furthered by tepid bathing or hot spirit fomen-

tations.

SULPHUR. Sulphur, taken internally, is said to exercise considerable control over the capillary system; influencing more or less the secretory function of the skin and mucous membrane of the air-passages and large intestines. It is laxative and diaphoretic. As a laxative it is gentle in its operation.

Sulphur is extensively used in cutaneous affections, and more especially in psora; for which it is considered a specific,

both internally and externally.

Dr. Kopp has recommended its employment in catarrhal and

inflammatory affections of the lungs, after the more urgent symptoms have been moderated by leeching, calomel, &c. The sulphur is said to act very beneficially when the expectoration is tenacious, or frothy and serous; and when the pulmonic phlegmasia is of metastatic origin, traceable to some antecedent acute eruptive disease, or to some suppressed exanthema. the inflammatory condition which attends scrofulous mesenteric disorders, the combination of calomel with sulphur is favorably spoken of by certain German writers. (Frankel.)

Horst, Schneider, and Randhan assert its efficacy in hoopingcough, when neither congestion nor febrile commotion are present; and Tourtual recommends it as a prophylactic against Heyfelder, however, denies its having any remedial

agency in either case.

Dose and form of exhibition. The washed sulphur, freed from all acidulous impregnation, is the best form for children, as it is not liable to gripe. The dose for children, from one to three years of age, is from 10 grains to a scruple; that for children upwards of four, from a scruple to a drachm. be taken mixed with syrup or treacle, or suspended in milk. It is commonly conjoined with bitartrate of potash or magnesia. In hooping-cough the Germans order sulphur in union with belladonna, ipecacuanha, musk, &c.; and in cutaneous diseases with the violet. (Viola tricolor.)

Dr. Clarke, of Dublin, recommends a lotion, made by infusing, for twelve hours, an ounce of bruised sulphur in a quart of boiling water, which he says contains a sufficient

impregnation for the cure of psora in children.

393.

R Sulphuris loti. Potass. Bitart. āā, 3ss. Confec. Sennæ, 3j. Syrup. Rosæ, q. s. Ut fiat electuarium.

S. A portion, the bigness of a nutmeg, to be taken as an aperient.

394.

R Pulv. Sennæ, 3vj. Sulphuris loti., 3ss. Pulv. Cinnam. Co., 3ij. Pulv. Croci, 3ss. Mellis, Ziv.

M. Fiat linctus.

S. A teaspoonful, night and morning, in catarrh with cough.

395.

R Sulphuris sub., gr. x.—
xx.
Mist. Acaciæ, 3vij.
Sacch. albi, 3ss.
Aq. Rosæ, 3j. M.

S. A teaspoonful hourly, shaking the phial well each time, for an infant in the first year.—Kopp.

396.

R Sulphuris. sub., 3ss. Sacch. albi, 3j. M. Fiat pulvis.

S. Half a teaspoonful, twice or thrice a day, as a preventive against measles.—Tourtual.

397.

R Sulphuris sub., gr. iv.-x.Sacchari albi, gr. x.M. Ft. pulv. dent tal. dos.No. x.

S. A powder thrice a day in hooping-cough.—Horst.

398.

R Sulph. sub., 3ss.—3j.
Calomelanos, gr. viij.-xvj.
Sacchari albi, 9iv.
M. Et. puly. divid in viii

M. Ft. pulv. divid. in viij. partes æquales.

S. A powder twice a day in remittent fever.—Fränkel.

399.

R Magnes. Carb.
Sacch. albi, āā, 3ij.
Sulphuris sub., 3j. M.

S. From half a teaspoonful to a teaspoonful, thrice daily, in cutaneous diseases.—Gölis.

400.

R Sulphur, præcip., 3ss. Magnesiæ Carb., 9j. Sem. Fæniculi, 9ss. Sacch. lactis, 3iss.

M. Ft. pulv.

S. Ten grains, four times a day, in crusta lactea.—Haase.

SYRUPI. Medicated syrups are repeatedly resorted to in the treatment of infantile diseases. The child, incapable of appreciating the object for which medicine is administered, sees in it only something nauseous, and manifests a feeling of repugnance, proportionate to the amount of disagreeable smell or taste it may possess. It is therefore expedient that the medical attendant should either select such remedies as shall not offend in this way, or else disguise and so render them as

palatable as possible. Now the medicated syrups are peculiarly appropriate in this respect, because children seldom discriminate the nicer gradations of taste, esteeming that alone grateful which is sweet.

The officinal syrups have the consistence of a linctus, and may be swallowed as such, or else diluted with some aromatic water. From their increased bulk they must, in a corresponding ratio, modify the bulk of the mixture into whose composition they happen to enter; hence it is proper on that account to estimate the dose a little higher. Thus, in a mixture of equal parts of syrup and water, the teaspoonful may be reckoned at 4 scruples, or a mixture of 4 drachms of water, and an ounce and a half of syrup will be equivalent to 12 teaspoonfuls; and a mixture of an ounce and a half of water and 6 drachms of syrup will contain about 15 teaspoonfuls. Syrups farther serve as a means of suspending such pulverulent substances as from their weight and insolubility would otherwise subside to the bottom of the vessel.

SYRUPUS ALTHÆÆ. Syrup of marsh-mallows, is a demulcent syrup; prone to spontaneous decomposition.

SYRUPUS PAPAVERIS. Syrup of poppy, is a favourite anodyne for children, but it is uncertain in its strength, being liable to spontaneous change or fraudulent sophistication. When genuine and well preserved, I ounce is reckoned equivalent to I grain of opium; consequently, half a teaspoonful is equivalent to the 16th of a grain or a drop of laudanum, and is the dose for an infant three or four months old. It is frequently ordered in linctus for cough.

401.

R Mist. Acaciæ, Zij.
Aquæ, Zj.
Syrup. Papaveris, Zvj.
Acid. Sulph. dil., Zj.
M. Sit mistura.

S. A teaspoonful when cough is troublesome.

402.

R Mist. Acaciæ, Zij. Syrup. Papav., Ziv. Tinct. Opii Camph., Zj. M. Sit linctus.

S. A teaspoonful occasionally.

SYRUPUS RHAMNI. Syrup of buckthorn, is cathartic. It was so much employed, about the time of Sydenham, as a medicine for children as to have obtained the name of domestic syrup, "syrupus domesticus;" but, from the uncertainty and unpleasantness of its effects, it has fallen greatly in repute-Dr. Casper, of Berlin, however, speaks favorably in behalf of its purgative action. "There is no article in the whole materia medica more effectual in producing watery evacuations or expelling flatus than the syrup of buckthorn; it does not occasion griping, and in this respect surpasses senna; it has no heating properties like aloes and rhubarb; nor is it, like castor oil, unpleasant to the taste. Its frequent use has one disadvantage, which is common indeed to most other cathartics, namely the difficulty of defining the dose. In general from 2 to 3 drachms suffice to empty the bowels freely. It is expedient, however, to begin with smaller quantities than the above, for fear of hypercatharsis. A teaspoonful administered to children a year or two old will determine in a few hours one or more watery motions." (Wochenschrift für die gesammte Heilkunde, 1833.)

SYRUPUS SENNÆ. Syrup of senna, is sometimes administered, to infants in the first month, as a laxative. The dose is a teaspoonful.

TABACUM. Tobacco, the leaf of the Nicotiana Tabacum, is sedative, emetic, and diuretic, producing those effects to a greater or less extent, to whatever surface it may be applied. From its deleterious properties it seems hardly admissible for internal administration to infants. Yet a German physician, Dr. Pittschaft, has added it to the number of remedies which have been proposed by his countrymen for the cure of hooping-cough. (Hufeland's Journal, 1832.)

Externally, enemata with tobacco-smoke have been recommended in the death-like syncope of new-born children; but, in the case of delicate infants, are more likely to do harm than good by increasing the stupor; hence Meissner very justly con-

demns the practice.

As a narcotic, for the purpose of producing relaxation in spasmodic affections, powdered tobacco, or common snuff, has

been recommended by Dr. Godman, of America, as an application to the throat and breast in cases of croup. It is also used in the shape of poultice, infusion, or ointment, in cases of tinea capitis, psora, and some other cutaneous affections. In the treatment of tinea the infusion is sometimes conjoined with conium, bichloride of mercury, &c. But in consequence of its liability to be absorbed, and to produce unpleasant effects on the system, it should be used with great circumspection.

403.

R Fol. Tabaci, 9j.
Inf. Aq. fervid, q. s. colatur, 3vj., adde
Syrupi, 3j. M.

S. To children a year or two old, a large teaspoonful; to those some years older, a tablespoonful every hour. Pittschaft. 404.

R Fol. Tabaci, 3j.

Coq. c. Aq. communi q.s.

per hor. \(\frac{1}{4}\); ad colatur,

\(\frac{3}{4}\);iij.

Sub finem coctionis addend.

Pulv. Conii, 3ij.

S. A lotion to be used against tinea.—Fränkel.

405.

R Fol. Tabaci, 3ij.

Infund. in s. q. Aq. per ½
hor. in colatur lb.j., solve
Hydrarg. Bichloridi, gr. iv.

S. To be used hot, as a
fomentation.—Wendt.

TAMARINDUS. The tamarind, tamarindus Indica, contains citric acid, tartaric acid, and bitartrate of potash. The pulp, possessing refrigerant and feebly laxative properties, promotes the evacuation of morbid intestinal accumulations in the mildest possible manner. Its use is therefore indicated in those cases where, under great vascular excitement, and even inflammation, it is requisite to unload the bowels gently of their contents, as in gastric fevers, bilious diarrhea, &c. By itself, tamarind pulp is very inert, many ounces being required to cause a single discharge. It is therefore necessary, in order to ensure

its evacuant effect, to combine with it manna, neutral salts, and the like, but not resinous cathartics.

Dose and form of exhibition. The pulp of tamarinds is employed as a cooling diuretic drink in febrile and inflammatory states of the system, in the proportion of half-an-ounce or an ounce to the pint of water. Convalescents often find the pulp a pleasant addition to their diet, and useful, by preserving the bowels in a loose condition.

406.

R Pulp Tamarind., 3ij.
Coq. in s. q. Aq. fervid,
q. per ½ hor. colatur,
3vj., adde
Mannæ, 3vj. M.

S. A tablespoonful or two every hour, for a child of four years old.—Wendt. 407.

R Pulp. Tamarind., 3j.
Potass. Bitart.
Sodæ Potassio-tart., āā,
3iij.
Sem. Fæniculi, 9j.
Syrup. Rosæ, q. s. ut ft.
electuarium.

S. A teaspoonful every second hour.

TANACETUM VULGARE. Tansy. This nearly obsolete medicine still maintains its reputation as an anthelmintic in some parts of the continent. Coinciding in respect to constitution and therapeutic agency with wormwood, it is employed for getting rid of lumbrici and ascarides. Any undue irritability of the system in general, or of the bowels in particular, contraindicates its exhibition.

Tansy is prescribed in the same combinations as wormwood; and the most celebrated compound into which it enters as an ingredient is the anthelmintic electuary of Bremser (Formula, No. 408). This is to be swallowed in the quantity of a teaspoonful morning and evening, for some time, in order that the remedy should not purge violently, but merely occasion one or two loose stools. At the same time enemata, according to another subjoined formula (No. 410,) are to be administered. In this way the viscid mucus is gradually removed, along with the disposition to generate these entozoa. A method certainly more efficient and praiseworthy than the ordinary drastic procedure.

Dose and form of exhibition. Tansy is given twice or oftener in the day, according to the age, in the dose of from 10 to 20 grains, in electuary with honey, in infusion (in the proportion of 3ij. to 3iij. of the strained liquor;) and conjoined with valerian root, santonica seeds, sulphate of iron, and laxatives. The seeds are said to be most effectual as a vermifuge.

Externally, it has been recommended in the form of poultice, along with chamomile flowers and wormwood, boiled in milk, and applied to the abdomen, to relieve the colic of worms; and in enemata also, in the ratio of from 2 to 4 drachms to a

couple of ounces of water. (Fränkel.)

408.

R Flor. Tanaceti, 3ss.
Pulv. Rad. Valerianæ, 3ij.
Pulv. Jalapæ, 9ij.
Potass. Sulphatis, 3ij.
Oxymellis Scillæ, q. s. ut
fiat electuarium.

S. A teaspoonful twice a day.—Bremser.

409.

R Flor. Tanaceti.
Sem. Artemisiæ, s. āā, 3iv.
Pulv Rhei, 3j.
Sodæ Potassio-tart., 3ij.
M. Fiat Pulv. d. in scatul.

S. A teaspoonful thrice a day, to a child ten years old.
Vogt.

410.

R Artemisiæ Absynth.
Rad. Valerianæ, āā, ʒj.
Cort. Aurantii.
Flor. Tanacet., āā, ʒss.
c. m. f. Spec.

S. Two heaped tablespoonfuls being infused for a night and strained, the strained liquor mixed with a spoonful of fresh ox-gall, to scrve for two enemata, in cases of ascarides.—Bremser.

411.

R Herb. Tanaceti.
Pulv. Valerian.
Sem. Artemisiæ, s.āā, ʒij.,
divide in iij. partes æq. M.

S. One portion, infused in about four ounces of hot water, to be used for an enema, morning and evening, against ascarides and lumbrici.—Vogt.

TARAXACUM. See Extractum Taraxaci.

TEREBINTHINÆ OLEUM. Essential oil of turpentine, as a stimulant and antispasmodic, is well adapted for children, one or two drops often relieving, instantaneously, flatulency and spasm. Though irritant to the skin, it does not affect the sensibility of the mucous membrane; but, on the contrary, is often advantageous in protracted diarrhæa, when much flatus attends; and also in that form of the disorder which accompanies worms in children. It constitutes, indeed, a potent remedy against all varieties of intestinal worms; and may be safely given to children under three years of age, in doses of from half a drachm to two or three drachms; and to children upwards of that age, in the dose of half an ounce. It may be administered in milk, or beat up with the yolk of an egg, and sweetened with syrup. As an anthelmintic it ought to be taken fasting, and strict abstinence enforced during its exhibition. Castor-oil may follow as a purgative; and this is, perhaps, a better way of giving it than combining both together. The turpentine may be repeated every four or five days.

A few drops of spirits of turpentine are strongly recommended for relieving the severe colic pains arising from flatulent distension of the stomach and bowels, which are often so harassing to the patient, in the advanced stages of infantile cholera. periodical colic attacking infants during the first three months, and in what are called "inward fits," from 3 to 6 drops of turpentine, given in a teaspoonful of olive oil or milk, will generally effect a speedy subsidence of the pain. The dose may be repeated in the course of an hour, without the least risk of injury. Dr. Eberle informs us of two instances of infantile erysipelas, in which unquestionable benefit was derived from this remedy. Three drops were given every four hours to an

infant above six weeks old. (Op. cit. p. 158.)

Dr. Dewees cured several cases of infantile diabetes, by "keeping the bowels freely open, and putting a quantity of the spirits of turpentine upon the clothes of the children, so as to keep them in a terebinthinate atmosphere." And much good has been done in this disease by a turpentine plaster laid over the region of the kidney. In iritic ophthalmia, from thirty to fifty drops, repeated twice a day, exert a favorable influence in subduing the inflammation, after depletion.

An enema, composed of about four ounces of warm milk and

half a drachm or a drachm of turpentine, is a useful remedy in cases of convulsion.

In its action on the skin, turpentine is very prompt and powerful; and if the derivative power of such applications be proportionate to the degree of irritation and pain they produce, few articles can equal the present one in this respect. Hence, as a rubefacient, it answers admirably in croup, after withdrawal of blood. For this purpose a piece of flannel, imbued with it, is to be applied round the neck. Children seldom bear this application more than twenty or thirty minutes at a time.

In tinea capitis, Gibbons recommends the hair to be removed, the scalp daily well washed with soap, carefully dried, and then rubbed for five or ten minutes at a time, with the subjoined

liniment. (No. 413.)

412.

R Aquæ Anisi, 3j.
Mist. Acaciæ, 3ss.
Olei Terebinth., pur., 3ss.
Olei Limon, vol., gtt. iv.
Syrupi Caryophili, 3iv.
M. Sit mistura.

S. One to two drachms every three hours.

Evanson and Maunsell.

A13.
R Ol. Terebinth.. 3j.
Ol Oliv, 3ij.
M. Sit Linimentum.
Gibbons.

TINCTURÆ. Tinctures, are better adapted as medicines for adults than children. The spirituous menstruum imparts to them heating and excitant properties, which may readily disturb the susceptible vascular system of children. They have, indeed, this advantage over other forms of exhibition, that many of them do not offend the palate, and that medicines which act powerfully in small doses may be always thus administered, when the proportion of alcohol is too minute to produce an appreciable effect. It should be observed, as a general rule, that tinctures are chiefly indicated in diseases characterized by debility; and that they are admissible only as antispasmodics, when it is well ascertained that the state of convulsion is independent of congestion or inflammation.

Of the officinal tinctures, (excepting those of cantharides and opium,) the quantity given to infants, during the

x oleren e, ummorrice, islane,

first year or two, is from five to ten drops, two or three times a day; for children more advanced, about double these proportions. In order to lessen their sharp penetrating taste, they ought to be administered in some aromatic water. As adjunct to other mixtures, the amount is from a scruple to a drachm, of which the dose for infants is a teaspoonful; that for children more advanced, a dessert-spoonful twice or thrice daily.

The following are those mostly employed in the treatment

of infantile diseases.

Tinct. Aloes. This is chiefly employed as an addition to anthelmintic enemata. A liniment, consisting of one part of the tincture with two parts of soap liniment, rubbed upon the abdomen every day for five or ten minutes, has been found beneficial in keeping the bowels regular.

TINCT. ASSAFŒTIDÆ. This possesses all the virtues of the drug. Ten drops administered every two or three hours, have been found highly useful in convulsions.

414.

R Lactis tepefact., 3j.
Aq. Menth. pip., 3ss.
Tinct. Assafætid., 3ss.
M. Injicienda pro enemate.

S. In convulsions.

415.

R Tinct. Assafætidæ, Əij. Syrup. Rhæados, Zj. M.

S. A teaspoonful every hour or two.—Fränkel.

TINCT. AUBANTII. Tincture of orange-peel, as stomachic and tonic, forms an excellent adjunct to other remedies, instead of more heating and bitter tinctures. The dose is from 10 to 20 drops several times a day.

Tincture Camphor. Tincture, or, as it is more commonly called, Spirits of Camphor, is employed externally as a lotion and fomentation in affections associated with deficiency of vital power; in chronic rheumatism, ædema, paralysis, ecchymosis, &c. In the erysipelas of new-born children, Underwood, Gartshore, and others, recommend washing the inflamed surfaces with spirits of camphor, in conjunction with the administration of Peruvian bark internally. Dr. Lodemann informs us that

he saved five children by this treatment; but Heim maintains it to be rather prejudicial and reprobates the employment of aromatic and volatile liniments in that disease. Gölis applied, in the fractures of infants, four-fold compresses imbued with this tincture.

TINCTURA CANTHARIDIS. See CANTHARIS.

TINCTURA CASTOREI. Tincture of Castor, is exhibited in combination with sal volatile, as an antispasmodic and carminative in the flatulent colic of infants, in the dose of six drops every two or three hours.

416.

R Tinct. Castorei, gtt. lx.
Sp. Ammon. Arom., gtt. xx—xxx.
Syrup. Aurantii, 3ij.
Aq. Fæniculi, 3vj. M.

S. A teaspoonful every two or three hours.—Fränkel.

TINCTURA CINCHONÆ COMPOSITA. The compound tincture of Peruvian bark, is a valuable adjunct to decoctions or infusions of bark and solutions of sulphate of quina, when exhibited in typhoid remittents. As a restorative of appetite, from 10 to 20 drops may be given to children twice or thrice a day, in a little wine and water, or in some aromatic water, sweetened with syrup.

TINCTURA OPII. See OPIUM.

Tinct. Rhei. *Tincture of rhubarb*, is a useful stomachic and tonic. It is prescribed in order to relieve flatulency, restore appetite, as in convalescence from fever. Hufeland saw benefit derived from administering it to scrofulous children, when affected with atony and relaxation of the alimentary canal.

Dose and form of exhibition. Tincture of rhubarb may be ordered to children two or three years old, in the dose of a small teaspoonful once or twice a day, diluted with some aromatic water. 417.

R Tinct. Rhei, c. 3j. Aq. Menth., p. 3iss. Syrup. Aurantii, 3ss. Aq. destill., 3j. M.

S. A dessert-spoonful thrice a day.

Tinctura Valerian E Composita. The compound, or ammoniated, tincture of valerian, is stimulant and antispasmodic. A few drops may be administered with advantage in atonic convulsions, and in colic. In the death-like syncope of newborn infants, a little may be rubbed with advantage on the nostrils.

UNGUENTA. Ointments, are applied for the same purposes in the case of children as in adults. It ought to be observed, however, that, in consequence of the extreme delicacy and susceptibility to impression of the cutaneous organ in the child, the salve should be recently prepared, as rancid fat proves irritant; and that a moderate extent of surface should be at first submitted to the inunction, as swelling, erythema, and other mischievous effects are readily induced. In a therapeutic point of view it should not be forgotten that, owing to the promptly absorbent nature of the skin of infants, a powerful result may be anticipated from the outward application of various medicines; hence, wherever we can influence the juvenile organism, through the intermediation of cutaneous sensibility and cutaneous absorption, this, the iatroliptic method, deserves a preference, and more particularly where the internal administration of the drug is fraught with danger, as is the case with opium, for example.

UNGUENTUM HYDRARGYRI, F. The process of inunction affords an efficient mode of introducing mercury into the circulation, and constitutes an important auxiliary in antiphlogistic plans of treatment. It is as incapable as internal administration of inducing in early infancy the specific effects of the drug on the salivary glands, the object for which it is occa-

sionally resorted to in the case of adults. Hence, certain theoretic writers have denounced the practice as one of equivocal advantage, because it is difficult to ascertain, with precision, the amount of mercury taken into the system; and because the delicate skin of infancy will not brook reiterated friction.

As an antiphlogistic agent, mercurial inunction is chiefly employed in subduing local inflammation externally, or as a subsidiary to other remedial means in relieving deep-seated affections of the like nature; to which may be added its usefulness in promoting the resolution of lymphatic and glandular obstructions, indurations, deposites, and effusions.

Its use is indicated, accordingly, in the following affections:

1. In internal inflammations, especially those in which the plastic or formative process prevails, or in which liquid exudations or other depositions endanger the internal cavities, or parenchymatous organs. To this head belong inflammation of the encephalon and its membranes, the precursors of dropsy of the brain; inflammation of the air-tubes, particularly croup; the second stage of peritonitis, that is, after effusion has taken place; and hepatitis. It must ever be borne in mind that in all the above instances mercurial inunction is but a secondary means of treatment, inadequate in itself to control the violence of the distemper, and tardy in its operation.

At any age above one year, half a drachm of the strong ointment, with a few grains of camphor, may be rubbed in every six hours, on any broad surface of the body. This may be in two days increased to two scruples or a drachm. The back offers the best surface; next to that, the inner surface of the

thighs.

But in certain cases the frictions should be directed, as nearly as possible, to the seat of the disease; thus, in croup, the throat is the preferable place, and, in peritoneal and hepatic inflammation, the abdomen. Instead of rubbing the throat, we may

apply a piece of flannel spread with the ointment.

Dr. Seidel has related three apparently hopeless cases of hydrocephalus cured by methodical mercurial inunction. In the first case, a scruple was the dose; and in the two others, half a drachm, rubbed in upon the neck, armpits, inner surface of the arms and the groins. In all, ten drachms were expended on the first child, twelve on the second, and fourteen on the third. (Jahresbericht d. schl. Ges.)

Should too powerful an effect be apprehended, the dilute may be substituted for the stronger ointment; were it expedient to enhance its action, it may be conjoined with camphor, or rendered stimulant by combination with an equal proportion of the volatile liniment. The inunction should never be performed upon a surface where there are leech-bites, as it may cause cutaneous irritation and inflammation.

2. In infantile syphilis, 15 grains of the mercurial ointment may be rubbed on the internal surface of the thighs, along the course of the lymphatics, alternately, once in two days, until the mouth be found hot, when it may be intermitted or continued, according to the state of the system and the effect on the disease; it must be persevered in till the symptoms be removed.

Some German practitioners, supposing the ordinary mercurial salve, prepared with hog's lard, not bland enough for the tender skin of new-born children, have proposed in its stead one composed of oil of cocoa. (See Formula, No. 418.) Oil of cocoa

is much more irritating than fresh hog's lard.

3. As a discutient and sorbefacient remedy mercurial inunction is useful, in cases of morbid effusions, — as in the synovial membranes of joints, in sanguineous tumors of the scalp, in chronic hydrocephalus, induration of the breasts, glandular enlargements about the neck and abdomen, and in inflamed conditions of the osseous and ligamentous structures. In the above cases a bit of ointment the bigness of a pea or bean may be rubbed upon the affected part twice or thrice in the day.

In infantile erysipelas, Dr. Dewees recommended, as a remedial means, the inflamed surface to be anointed with mercurial ointment. If vesications cover the part, they should be broken previously to the application; and if incrustations have formed, or if suppuration have commenced, the ointment may be applied to the inflamed margin, and a portion of the sound skin. (Pereira, Lectures on Materia Medica.) Dr. Dewees states, that Dr. Schott has found a solution of corrosive sublimate, in the proportion of a grain to the ounce of water, equally beneficial with the ointment.

In ascarides, a bougie smeared over with mercurial ointment, and introduced into the rectum, has been found beneficial.

418.

R Hydrargyri puri, 3vj. Sev. Ovil., 3ss.

Contere in mort. lapid. ad perfectam hydrargyri extinctionem, tunc admisce

Ol. Cacao, 3j.

S. Mercurial ointment for infants. - Wendt.

419.

R Ung. Hydrarg. Linim. Camphoræ, C., āā 3iv.

S. Two teaspoonfuls to be rubbed every hour over the throat, in cases of croup. Hecker.

UNGUENTUM HYDRARGYRI NITRATIS. Citrine ointment, as a stimulant and alterative, is extensively applied in the treatment of various affections of the skin. Diluted with an equal portion of fresh lard, it has been found highly beneficial in various forms of porrigo, as tinea capitis, and crusta lactea. using it against the latter disease, the bowels ought to be kept loose, by daily doses of sulphur and magnesia. In excoriation behind the ears the citrine ointment, so reduced, is an excellent application. It should be spread thinly on a soft piece of linen, and laid on the sores during the night. In the morning the parts should be carefully washed with warm water and fine soap, and then dressed with the unguentum zinci. Mixed with its own weight of almond-oil, and laid on the lids by means of a hair-pencil, it is an excellent remedy in psor-ophthalmia, and other disorders of the eye and its appendages, connected with porrigo of the face or scalp.

Dilute citrine ointment has been found useful in acne and herpes. In the former case, promoting the resolution of the tubercles, in the latter accelerating the fall of the crusts, and abating heat and itching. It is also recommended in pityriasis and lepra; and as a dressing to unhealthy ulcers, and to syphi-

litic sores about the anus.

UNGUENTUM PICIS LIQUIDE. Pitch ointment, is a good stimulant remedy in various forms of skin disease. In tinea capitis it has been externally employed with signal advantage. In bad cases of this troublesome affection, it should be applied to the shaved scalp night and morning; and the patient should constantly wear a cap thickly spread with the ointment on its internal surface. In the local treatment of crusta lactea, a small portion of the diseased part should in the first place be touched with the ointment. When this is relieved, a second spot must be selected for its application, and so on until the whole of the diseased surface has been passed over and rendered sound.

Unquentum Sulphuris Simplex et Comp. Sulphur ointment, is the approved remedy for psora. In the case of children it is recommended to apply it over a part of the diseased surface only at one time, passing over the remainder at successive applications. By this cautious procedure, the risk of inflammation or intumescence of the skin is prevented. Plenk and Mursinna speak in favorable terms of the efficacy of frictions on the scalp with the compound ointment, in tinea capitis.

Unguentum Zinci. Zinc ointment, is a bland salve. It is useful in crusta lactea, to prevent the troublesome itching. An extemporaneous ointment, composed of 5 grains of oxide of zinc, 2 drachms of lard, and 10 drops of laudanum, is very useful to prevent the eyelids from sticking together in scrofulous ophthalmia.

VALERIANA. Valerian, the root of the Valeriana officinalis, is gently stimulant, having an especial direction to the nervous system, but without heating or narcotic effects. It is said to promote some of the secretions, more particularly that of the skin. As a medicine, it is borne without inconvenience by the most sensitive individuals; and would be well adapted for children, did not its penetrating taste and smell prove an obstacle to its administration.

Valerian is useful in cases of epilepsy and other convulsive diseases depending on verminous irritation; it seems to prevent the disposition to generate worms, by invigorating the alimentary canal. It has also been extolled as a remedy in the ordinary infantile convulsions; but these are so often connected with congestion of the brain, as to render the employment of this and other stimulants very equivocal. In febrile diseases, accompanied by low nervous symptoms, and in exanthematous disorders, when much nervous debility prevails, and the eruption is tardy in being developed, valerian is said to exercise a favorable action in combination with ammoniacal diaphoretics, provided the vital powers be not seriously depressed.

Richter considered it, in such cases, a medicine of indispensable value, and was in the habit of prescribing it even during the early period of dentition.

Dose and form of exhibition. The root of valerian may be ordered in the dose of 5, 10, or 15 grains two or three times a day, in powder or linctus; or an infusion made in the proportion of from 2 drachms to half an ounce to 6 ounces of water, may be given by spoonfuls, in union with diaphoretic, volatile, antispasmodic, and anthelmintic remedies. In colic, connected with an acescent condition of the first passages, 2 grains of powdered valerian, with 3 grains of magnesia, to which, if the bowels are torpid, a few grains of rhubarb may be added, will be found very efficient.

An infusion made with 2 drachms of valerian has been administered in the form of enema, conjoined with

fætida, &c.

420.

R Pulv. Valerianæ, 9j. Calomelanos, gr. iij. Sacch. albi, 3j. M. Ft. Pulv. divid. partes iv. vel vj. æquales.

S. One to be taken thrice a day, in verminous complaints.

Gölis.

421.

R Pulv. Valerian., 3ss. Pulv. Jalapæ, 3ij. M. Ft. Pulv. in viij. partes æquales dividend.

S. A powder to be taken the first thing in the morning.

Störck.

422.

R Pulv. Jalap. Ferri rament, āā, 3j. Pulv. Valerian., 3iij. Syrup. Aurantii, q. s. ut ft. electuarium.

S. Dose, a teaspoonful.

423.

R Rad. Valerian., 3ss., Inf. in s. q. Aq. fervid, per hor. colatur, Zvj. refrig., adde Æther. Sulphur., 3ss. Liq. Ammon. Acet., 3ss. Syrup. Croci, 3j.

S. A tablespoonful every second hour, in eruptive diseases.

424.

R Pulv. Valerian. Magnes. Carb., āā 3j. Pulv. Iridis, Flor., 3iss. Pulv. Glycyrrbizæ, 3ij. Sem. Anisi, 3ss. Croci, gr. viij.

M. Ft. Pulv.

S. Ten or twenty grains twice or thrice daily, in acidity and flatulent colic .- Hufeland.

425.

R Pulv. Valerian, gr. j. Pulv. Ipecac. Co. gr. ss. M. Ft. Pulv.

S. A powder to be taken every six hours, by a child between two and five years old, suffering from dysuria.

Eberle.

VINUM. Wine, ranks in the list of Materia Medica, as a powerful stimulant and antispasmodic. During early life, provided the child be healthy and vigorous, wine is not merely superfluous, but is injurious; inducing feverish excitement, and morbid irritability. The hilarity and buoyancy of mind natural to that period supersede the necessity for such extrinsic stimuli; and it is, therefore, a false kindness to pamper children with wine.

In the convalescence from fever, and in exhaustion and sinking of the vital powers, wine is the best remedy that can be employed. Its administration, however, must be carefully watched, lest it should heat the patient, and induce sensorial disorder. In the death-like syncope of new-born children, if the infant be extremely feeble, ten or fifteen drops of wine may be given and repeated at suitable intervals. (Wendt.)

White-wine whey is prepared by adding four ounces of wine to a pint of boiling milk, straining without pressure to separate the curd, and sweetening the clear whey with loaf sugar. It is a peculiarly safe and grateful stimulus, and often acts as a mild diaphoretic. A teaspoonful administered every hour, or every half hour, is an excellent stimulant in infantile erysipelas; and in malignant aphthæ a weaker whey, made with ten parts of milk and one of white wine, is recommended to be liberally administered, by Dr. Hamilton, of Edinburgh.

In some parts of the continent, wine is employed externally as a stimulant adjunct, in the form of friction, fomentation, or bath. Thus, in the asphyxia neonatorum, it has been suggested to plunge the child, five or six times, into a mixture of eight

parts of warm water and one part of wine. In the sanguineous tumour of infants, occurring immediately after birth, fomentations with warm wine have been recommended; but Meissner justly blames the practice, as liable to be followed by cerebral congestion.

ZINCI OXYDUM. Oxide of zinc, is a valuable tonic, and exerts a favorable influence in the decline of acute diseases of

a spasmodic character.

It has been much employed in the convulsive affections of children; and in cases wholly independent of organic disease, or unconnected with febrile irritation, will occasionally do much good. Dr. Brâchet considers it among our most useful remedies, in cases recurring from the force of habit, and from inordinate irritability. He recommends it to be given in union with cicuta or henbane, and relates several cases in which the protracted use of this combination entirely prevented the repetition of the convulsive paroxysm; and "to which the children had been subject for a very considerable time." Where the convulsions are connected with verminous irritation, the union of oxide of zinc with calomel is reckoned useful.

It is regarded as one of our most valuable remedies in infantile epilepsy. "I used this article," says Dr. Eberle, "in the case of a child, about four years ago, with unquestionable advantage. The fit, which recurred twice and sometimes three times a month, was suspended, by the use of this medicine, for upwards of four months; and it never after returned more than once a month." Here it ought to be given in as large doses as the stomach will bear. A child, two years old, may be treated with a quarter of a grain, gradually increased to a half or even a whole grain, and the dose be repeated thrice daily. It appears to do most good in cases recurring from habit, and where the original exciting cause is no longer present. In epilepsy and chorea, symptomatic of worms, Tourtual recommends the combination of oxide of zinc and wormwood root, as highly efficient. It is consistent with his experience that the operation of anthelmintic remedies is enhanced by the addition of wormwood-root. Oxide of zinc has been used as a palliative in convulsions occurring in the course of other diseases. has prescribed it in those accompanying dropsy in the brain; and Hufeland in those attendant on tardy and retrocedent smallpox, in union with opium. M. Guersent recommends its exhibition in protracted hooping-cough. But here, as in convulsions, it seems beneficial only when the cough is kept up by habit, acting on an irritable and debilitated frame of body.

In psoriasis, and some other diseases of the skin, when associated with faulty digestion, the combination of oxide of zinc with an alkali, has proved of service. The one correcting the redundant accescence, the other imparting tone to the stomach.

Dose and form of exhibition. Oxide of zinc may be administered to infants in the dose of one-fourth of a grain (more is apt to vomit); to children between one and three years old, in that of half a grain, increased to a grain; to those more advanced, in that of two or three grains, three or four times a day, in mucilage and syrup. It may be advantageously combined with magnesia, soda, calomel, musk, extract of henbane, &c.

Externally it is employed as a desiccant to ulcerated or excoriated surfaces, when the discharge is copious, or when they are painful and inflamed, as in the case of crusta lactea, intertrigo, burns, &c. Although this substance have not the powerful desiccant and astringent properties of the saturnine preparations, its application to extensive ulcerated surfaces may induce, through suddenly-arrested secretion, dangerous metastasis to important organs. The ointment is more frequently resorted to than the dry powder.

426

R Zinci Oxydi, gr. vj. Cretæ ppt. 3ss. Sacchari albi, 3iss. M. Ft. Pulv. divid. in xij. partes æquales.

S. A powder to be taken every second hour.—Fränkel.

427.

R Zinci Oxydi, gr. j.
Vin. Opii, gtt. j.
Sacchari albi, 9j.
M. Ft. Pulv. dent tal. doss.,
No. vj.

S. A powder every third hour, for a child from two to six years old, suffering from convulsions in the course of small-pox.—Hufeland.

428.

R Zinci Oxydi, gr. ½. Calomelanos, gr. j. Sacch. albi, Əss.

M. Ft. Pulv. dent tal. dos., No. vj.

S. A powder every two hours. Fränkel.

429.

R Moschi. Zinci Oxydi, āā, gr. ij. Sacchar. albi, 9ss.

M. Ft. Pulv. dent tal. dos., No. vj., in chart. ceratâ.

S. A powder every two hours, for a child of two years old, labouring under laryngismus stridulus—Fränkel.

430.

R Zinci Oxydi, 9j. Pulv. Valerian, 9viij. Sacch. Albi, 3j. Mucilag. Gumm. Tragacanth, q. s. ut ft. Trochisci, No. xl.

S. Two lozenges thrice daily, for a child of four years.—From Phöbus's Receptirkunst. 431.

R Zinci Oxydi, 9ss. Sem. Lycopodii, 3ss. M. Ft. Pulvis.

S. Dusting-powder.-Vogt.

432.

R Butyr. rec. non salit., \(\frac{z}{z}\)j. Zinci Oxydi, 3ss. Opii subtiliss. pulv., gr. vj. M. Ft. Unguentum.

S. To apply to the affected parts in crustalactea.—Henke.

433.

R Zinci Oxydi.
Sem. Lycopod., ãã, gr. xv.
Ung. Sambuci, 3ss.
M. Ft. Unguentum.

S. Salve to ulcers and excoriations.—Hufeland.

ZINCI SULPHAS. Sulphate of zinc, is tonic, astringent, and, in large doses, promptly emetic. As a tonic, it exerts its primary influence on the stomach. It is more powerful than the oxide; and being less heating to the system than sulphate of iron, is considered well suited to cases of debility, attended with irritation. In inveterate and deeply-rooted spasmodic diseases, such as epilepsy, chorea, pertussis, &c. it has been employed with advantage, when the oxide has proved too inert as an internal remedy. As an emetic, sulphate of zinc, in consequence of the local irritation it excites upon the nerves of the

stomach, acts instantaneously, without nausea, producing a single but copious ejectment, and is chiefly administered to dislodge poisonous substances from the stomach, or to provoke the bursting of abscesses in the tonsils.

Dose and form of exhibition. Sulphate of zinc is exhibited as a tonic to infants in the dose of from 1th to 1th of a grain, and to older children in that of a grain, two or three times a day, in solution with acids. As an emetic, a solution, made by dissolving 2 grains in an ounce of water, may be given by

spoonfuls every ten minutes, till it acts.

Externally, sulphate of zinc is employed as a lotion and collyrium, in the proportion of from 1 to 3 grains to the ounce of water, in the case of indolent ulcers, relaxation of the conjunctiva, specks on the cornea, and in the advanced stages of infantile ophthalmia. It is also recommended as a good topical stimulant and astringent in cynanche, aphthæ, and ulceration of the mouth when dissolved in rose-water, infusion of sage, or mucilage, or as an adjunct to tincture of myrrh.

434.

R Zinci Sulphatis, 3j. Infus. Salviæ, 3ij. Mellis Rosæ, 3j. M. Ft. linctus.

S. To be applied to the fauces in ulcerated sore throat. Wendt.

436.

R Zinci Sulphatis, 9j. Liq. Plumbi Diacet, 3ss. Tinct. Camphoræ, 3ij. Aq. Destillat. 3x. M. Sit lotio.

S. Wash for the eyes in ophthalmia neonatorum .- J. A. Schmidt.

435.

R Zinci Sulphatis, 9j. Mist. Acaciæ. Syrupi Mori, āā Zj. M. Ft. linctus.

S. To be applied to ulcers inside of the mouth.-Frankel

437.

R Zinci Sulphatis, gr. j.-iv. solve in solutione Opii aquosà, 3iss.-3ij. M.

S. A drop to be put into the eye, two or three times a day, for removing opacity of the cornea .- V. Ammon.

EXHIBITING THE DOSES OF MEDICINES, ACCORDING TO DIFFERENT AGES. A TABLE,

From 1 to 3 years.	3 gtts -5 gtt.	gtt3 gtt.	2 gr.—2 gr. 3 gr.—6 gr.	2 gr: -1 gr.	6 gr 2 gr.	3 gtt. 10 gtt.	1 gr2 gr.	3 gr.—5 gr.	2 gr.—3 gr.	4 gr.—10 gr.	5 gr.—15 gr.	5 or.—15 or.
From 4 to 7 years.	5 gtt.—10 gtt. 8 ott.—20 ott	5 gtt.—10 gtt.	o gr.—o gr. 6 gr.—10 gr.	2 gr.—4 gr.	5 gr.—1 gr.	10 gtt.—20 gtt.	2 gr.—5 gr.	5 gr.—10 gr.	2 gr.—4 gr.	10 gr 20 gr.	4 or A or	15 gr.—585.
	1 1		, ,			1	1		1		1 1	1
	c Acid -	1 1			,	1	th -	, 1	1	1		
	Acidum Hydrochloricum. Muriatic Acid - Acidum Sulphuricum D. Dilute Sulphuric Acid	iuric Ether	Sal-Ammoniac	Ammoniæ Sesquicarbonas, Smelling-Salt Antimonii Potassio-Tartras, Emetic Tartur	ida -	ivi-Balsam	Trinitrate of Bismuth	owder -	1	wder -	1	1
	Acidum Hydrochloricum.	Æther Sulphuricus. Sulphuric Ether Aloë. Aloes	Ammonia Hydrochloras. Sal-Ammoniac	Sesquicarbonas.	Assafætida. Gum Assafætida	Balsamum Copaibæ. Capini-Balsam	Bismuthi Prishtras. Triv Borax Riborate of Soda	Calumba. Columbo Root Powder	Camphor	carbo Ligni. <i>Charcoal Fowder</i> - Cascarilla. <i>Cascarilla Rark Ponder</i>	Catechu. Japan Earth	Cinchona. Peruvian Bark
	Acidum Hy Acidum Su	Æther Sulphu Aloë. Aloes	Ammoniæ	Ammoniæ Antimonii 1	Assafætida.	Balsamum	Borax Riborate of S	Calumba.	Camphora. Camphor	Cascarilla.	Catechu.	· Cinchona.

A Table of the Doses of Medicines.

	From 4 to 7 years.	From 1 to 3 years:
Contrajerva. Contrajerva, compound powder of -	10 gr.—9j.	3 gr.—10 gr.
Creta. Prepared Chalk	10 gr.—3j.	5 gr 10 gr.
Crocus. Saffron	3 gr 6 gr.	2 gr 3 gr.
Cupri Sulphas. Sulphate of Copper	½ gr.—1 gr.	1 gr.—3 gr.
	5 gr.—10 gr.	2 gr.—5 gr.
Digitalis. Foxglove Powder	3 gr 3 gr.	14 gr4 gr.
Extractum Belladonne. Extract of Deadly Nightshade	Sr Sr.	10 Cr. 1 Cr.
Conii. Extract of Hemlock	2 gr.—5 gr.	1 gr 1 gr.
Hæmatoxyli. Extract of Logwood	8 gr.—10 gr.	2 gr.—5 gr.
Hyoscyami. Extract of Hendane	2 gr.—5 gr.	4 gr.—1 gr.
	4 gr.—2 gr.	4 gr 1 gr.
	l gr.—3 gr.	4 gr.—] gr.
Taraxaci. Extract of Dandelion		10 gr3i.
Ferri Ramenta, Iron Filings	5 gr10 gr.	1 gr 3 gr.
Ammonio-Chloridum. Ammoniated Iron	3 gr 6 gr.	l gr.—3 gr.
Potassio-Tartras Tartarized Iron	5 gr.—20 gr.	2 gr 5 gr.
Sulphas. Sulphate of Iron	, gr2 gr.	½ Cr3cr.
Filicis Radix. Root of Male Fern	9i.—3i.	0
Gualacum. Resin of Gualac	5 gr.—10 gr.	1 gr 5 gr.
Hydrargyrum cum Creta. Mercury with chalk	3 gr 5 gr.] gr.—3 gr.
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	From 4 to 7 years.	Froml to 3years.
Hydrargyri Bichloridum. Corrosive Sublimate -	20 gr. 12 gr.	30 gr 10 gr.
Hydrargyri Chloridum. Calomel	l gr.—5 gr.	2 gr4 gr.
Infusum Sennæ Co. Compound Infusion of Senna	, 3×s.—3j.	5j.—3iiij. fl.
Iodinium. Iodine	6 gr.—l gr.	g gr. 6 gr.
Ipecacuanha. Ipecacuanha Powder	5 gr.—Jj.	½ gr.—5 gr.
Jalapa. Jalap Powder	5 gr.—15 gr.	l gr.—5 gr.
Liquor Ammonia Acetatis. Solution of Acetate of Ammonia		20 gtt30 gtt.ff
Barii Chloridi. Solution of Muriate of Baryta	4 gtt.—10 gtt.	2 gti4 gtt.
Calcii Chloridi. Solution of Muriate of Lime	20 gtt.—3ss.	5 gtt.—20 gtt.
Calcis. Lime-Water	38s.—3iss.	5j.—3iij. fl.
Magnesia	15 gr.—3ss.	2 gr10 gr.
Magnesiæ Sulphas. Epsom Salt -	Ji3ss.	9j.—3j.
Manna. Manna	Jij.—3ss.	9j.—3j.
Morphia ejusque Sales. Morphia and its Salts -	14 gr 16 gr.	40 gr 30 gr.
Moschus. Musk	6 gr10 gr.	2 gr.—6 gr.
Mucuna Pruriens. Cowhage	5 gr.—10 gr.	
Opium. Opium.	½ gr.—3 gr.	20 gr 10 gr.
Oxymel Sciilæ. Oxymel of Squill -	20 gtt.—3j.	10 gtt.—20 gtt
Plumbi Acetas. Sugar of Lead	½ gr.—2 gr.	$\frac{1}{6}$ gr. $-\frac{1}{2}$ gr.

A Table of the Doses of Medicines.

From 1 to 3 years.	2 gr 5 gr.	2 gr6 gr.	2 gr.—4 gr.	3 gr.—5 gr.	J.—588.	½ gr.—2 gr.	½ gr.—2 gr.	4 gr 2 gr.	o gr.—10 gr.		2 gr. — 3 gr.	1 gr.—3 gr.	3 gr.—6 gr.	3ss.—3j.	رن — عاد ازن — عاد	6 gr.—9j.
From 4 to 7 years.	5 gr.—15 gr.	6 gr.—Đj.	4 gr.—6 gr.	o gr.—15 gr. Zss. Zs	9i.—3ss	2 gr.—6 gr.	2 gr.—5 gr.	½ gr.—2 gr.	12 gr.—5j.	3 cm - 31.	518s.—78s.	3 gr.—5 gr.	6 gr.—12 gr.	513. — 588.	7ii 7ss	9.j.—355. 9j.—9ij.
		1	!			1	•		, ,		of water -	,				
-	Potassa Acetas. Acetate of Potash	Nitras Saltnotus Brearbonate of Potash	Sulphas. Sulphate of Potach	Tartras. Tartrate of Potash	Bitartras. Cream of Turtur	Fulvis Ipecacuanhae Co. Dover's Powder	Ouing Disniples Disniples of Original	Rheum. Rhubarb Powder	Ricini Oleum. Castor Oil	Scammonium. Scammony -	Senega. Snake-Root, decoction of Zi. to a pint of water	Securicarbones Carbonate of Soda	Phosphas. Phosphate of Sodu	— Potassio-Tartras. Rochelle Salt	Sulphas. Glauber's Satt	Spigelia. Pink Root Powder

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From 1 to 3 years.	2 gtt.—10 gtt. 5 gtt.—20 gtt. 10 gr.—9j. 5 gtt.—20 gtt. 1 gtt.—5 gtt. 1 gtt.—5 gtt. 1 gtt.—5 gtt. 2 gtt.—10 gtt. 2 gtt.—4 gtt. 5 gtt.—15 gtt. 5 gtt.—15 gtt. 5 gtt.—9j.ft. 5 gtt.—9j.ft. 5 gtt.—9 gtt. 5 gtt.—9 gtt. 5 gtt.—15 gtt. 5 gtt.—15 gtt. 1 gtt.—5 gtt. 5 gtt.—16 gtt. 1 gtt.—5 gtt. 5 gtt.—16 gtt. 1 gtt.—5 gtt. 5 gtt.—16 gtt. 1 gtt.—5 gtt. 5 gtt.—16 gtt.	
From 4 to 7 years.	10 gtt.—20 gtt. 9j.—5j. 5j.—5j. 3 gtt.—12 gtt. 10 gtt.—20 gtt. 5 gtt.—15 gtt. 9j.—5j. 4 gtt.—10 gtt. 9j.—6gt. 9j.—5j. 5 gtt.—10 gtt. 5 gtt.—10 gtt. 7 gtt.—10 gtt. 7 gtt.—10 gtt. 9j.—5j. 10 gtt.—30 gtt. 10 gtt.—30 gtt. 10 gtt.—30 gtt. 10 gtt.—30 gtt. 10 gtt.—30 gtt.	
	Spiritus Ammoniæ Aromaticus. Spirit of Sal-Volatile  Sulphur Lotum. Washed Sulphur  Syrupus Papaveris. Syrup of Poppy Terebinthinæ Oleum. Spirits of Turpentine Tinctura Assafætidæ. Tincture of Assafætida  Cantharidis. Tincture of Assafætida  Cinchonæ Co. Compound Tincture of Bark  Digitalis. Tincture of Forglove Ferri Sesquichloridi. Muriated Tincture of Iron  Lobeliæ Infl. Tincture of Lobelia  Opii. Laudanum.  Opii. Laudanum.  Valerianæ Co. Compound Tincture of Valerian  Sinci Oxydum. Oxide of Zinc  Salphas. Sulphate of Zinc	

## SIMPLE RULES

FOR THE

### DIET AND REGIMEN OF CHILDREN.

THE principal alimentary matters employed by man and the more perfect animals have been reduced to three great classes, namely, the saccharine, the oily, and the albuminous. Milk, the only substance throughout the range of organization designed and prepared by nature expressly as food, is a mixture of these three. "In milk, therefore," as Dr. Prout observes, "we find a model of what an alimentary substance ought to be—a kind of prototype, as it were, of nutritious materials in general," This animal fluid, intended by Creative Wisdom as the sole food of the infant during the first term of existence, is essentially an emulsion of albumen, oil, sugar, and a peculiar principle, suspended in a large body of water. In composition, it is exceedingly analogous to blood; consisting like it of a chemical solution, and an admixture of an undissolved matter suspended in it. Apparently homogeneous when first drawn, it can be resolved into three organized compounds, cream, curd, and whey. Cream contains the emulsive matter which is not dissolved, more concentrated, and mixed with a portion of This emulsion is easily decomposed by agitation; whereby oxygen is absorbed, and the butter separated; the milk becoming by this operation more acid than it was at first. According to Berzelius, cream of the specific gravity 1.0244 is composed of-butter 4.5; cheese 3.5; whey 92.0.

In the milk of different creatures, the three principles above mentioned exist in endlessly modified forms, and in very different proportions. The milk of the human female contains more sugar, whey, and cream, and less caseum or cheese, that is, more of the oily and saccharine principle, and less of the albuminous, than that of any other animal. The milk which most resembles it in composition is that of the ass. That there is no substance in nature, nor anything prepared by art, which forms so congenial and wholesome a nutriment during the early period of infancy as human milk, is abundantly evident

when we consider the structure of the mouth in relation to the kind of food. The infant comes into the world with soft and toothless gums, full and prominent lips, and an instinctive ability and readiness to grasp the nipple with its tongue and lips, and to perform the action of sucking in the most perfect manner. For a considerable time it remains wholly incapable of performing the motions of mastication. (Eberle.) Hence, when milk is supplied in sufficient quantity by the maternal breast no other alimentary substance ought to be given before the end of the third month after birth. Dr. Cullen fixed the term at five months. "As a general rule," says Dr. Eberle, "no other nourishment need be allowed, anterior to the period when the first teeth make their appearance; unless, from deficiency of milk or some other cause, the use of addi-

tional aliment becomes necessary."

The custom of feeding new-born children with inappropriate articles of food is very reprehensible. The tender and uninured digestive organs of the infant are thus often seriously injured. during the first twenty-four hours. "Nature herself," observes Dr. Eberle, "seems to point out the impropriety of this practice. She withholds the nourishment which she provides, until many hours after birth. It is true, indeed, that the secretion of milk in the female breast is often delayed a much longer period than it would be prudent to withhold nourishment from the infant. Under such circumstances, a few teaspoonfuls of some very bland and weak fluid, as a mixture of two parts of fresh cow's milk and one part of warm water, may be safely given, at such intervals as will obviate all risk of overloading or distending the stomach: this latter error is most to be deprecated. At every period of life, over distension of the stomach by food or drink is one of the most certain and powerful causes of indigestion; and we can scarcely conceive that the tender and susceptible stomach of the new-born babe can escape serious injury and irritation, when early overcharged with food, even of the mildest kind. The organs of digestion, already feeble, are oppressed with a task for which they are wholly unequal, and all the harassing and distressing consequences of dyspepsia ensue." Mauriceau, the celebrated French accoucheur, has recorded a striking instance in point: that of a healthy child which died the third day after birth, from convulsions and colic, caused by its having been fed with bouillie or flour boiled in milk, (Carault, Guide des Mères,

p. 105. Paris, 1828.) Moderate abstinence never does harm. Hence with healthy infants several hours may without hazard be suffered to pass, immediately after birth, before any ali-

mentary substances are introduced into the stomach.

After the secretion of milk is once established and furnished in adequate measure, the infant should be nourished exclusively by the breast. Not even the mild and simple fluid just mentioned should be allowed, unless some special reason exist for the use of additional nourishment. It seldom occurs in healthy mothers that the quantity of milk supplied by the breast does not afford ample sustenance for the first two or three months, and in general much longer, without the necessity of any additional artificial food. Should it be otherwise, however, or should there be an inability of suckling the child, in consequence of incapacity or disease on the part of the mother, a healthy wet-nurse should be procured.

In the selection of a wet-nurse, the age of the milk is a point of considerable importance. As a general rule, this should not vary much from that of the child, up to about the fourth month. After this period such a close relation between the ages of the milk and the child is not of much consequence; for a child, five or six months old and upwards may be effi-

ciently nourished by a fresh breast.

When a wet-nurse cannot be conveniently procured, then recourse must be had to artificial nursing, or what is called bringing up the child by hand. Here, the mixture of milk and water above mentioned, as approaching nearer to the nature of human milk than anything else that can be readily obtained, should constitute the sole aliment until the first teeth make their appearance. When this happens to disagree, the milk may be boiled and skimmed; or barley-water, or liquid preparations of arrow-root may be substituted by way of change. After the third month, three parts of milk to one of water may be allowed. Whatever is given it is an essential point to let it be sucked out of the bottle, furnished with the usual mouthpiece. (See LAC.) By this contrivance the child will be nourished in the same gradual manner, as when at the breast, and will rarely take more than its appetite demands, an error frequently committed when fed with a spoon or boat. over, the food in thus slowly passing through the mouth is intimately mingled with the saliva; the quantity of which is far greater than is usually supposed, and its influence upon digestion

highly important.* The utmost attention should be paid to keep the bottle particularly clean and sweet. It should be well washed both inside and outside with hot water, morning and evening. The same food should not be allowed to remain in it more than three or four hours; the quantity introduced should not much exceed what the child may be supposed to require; and no fresh supply should be added to what it leaves. The remainder, on the contrary, ought always to be emptied, and the bottle well rinsed with water. By these precautions the food will always be sweet and free from offensive or irritating qualities. When being fed, the child should be taken up and supported in an easy, half-reclining position, on the lap or arms of the nurse; and kept in a state of repose for at least thirty or forty minutes after each repast. The practice of dandling and jolting infants soon after they have taken nourishment is decidedly improper. Rest is particularly favorable to digestion, more especially during its primary stage.

The infant may have the breast every two or three hours during the first and second months; after the fourth month it may be nursed or fed every fourth hour, and after the sixth, every fifth, according to the strength of the mother. If overfed its sleep will be heavy and disturbed, or its stomach will reject what has been swallowed. The periods of suckling ought to be before the hours of meals and of sleep; otherwise, the health

of both mother and child will be apt to suffer.

At the end of the sixth month the infant may be more fed than nursed; prior to that age, it should be more nursed than fed. The various kinds of diet are these: water thickened with sago, semolina, arrow-root, rice, or grits with the addition of one fourth or one fifth of milk; or pure broth of beef, mutton, or chicken, with or without some farinaceous addition. Cream, as it contains little caseum and whey, is not so much disposed to turn sour in the stomach as milk. Accordingly, when diluted with water, and sweetened with sugar, it forms an excellent article of diet for infants strongly disposed to acescency. In such cases, too, farinaceous decoctions mixed with a small portion of cream are generally digested with perfect ease. Thin oatmeal gruel or rice-flour boiled in water

^{*} That the saliva is not a mere inert diluent is proved by the fact of its coagulating milk.

along with a teaspoonful of cream to each quartern of the liquid preparation will answer very well. The amylaceous pulp is always more easily assimilated when so combined; especially where the power of the stomach, in organizing and vitalizing the different alimentary substances, is low. Small portions of the preparations above mentioned should be given, at regular periods, three or four times daily. This will prepare the infant for the change which it has to undergo in the character of its food when weaned, and thereby tend to lessen the liability to unpleasant consequences from the change. It has been remarked that infants who have been moderately fed with suitable food some time previously, almost always accommodate themselves much more readily and with much less uneasiness to the new diet, than such as have been exclusively nourished at the breast.

The child may be weaned about the ninth or tenth month, or as soon as all the cutting teeth have made their appearance. At this period its digestive organs will have acquired sufficient tone and activity to enable them to digest without difficulty a simple and appropriate artificial diet; and the system in general will have attained a state of development which renders such a nourishment more suitable to the exigencies of the organization, than the less substantial aliment derived from the breast. It ought to be taken into account that, after a time, the maternal milk becomes deteriorated. Dr. Morton has adduced numerous cases to prove that protracted lactation is a common cause in children of water in the brain, and other serious complaints. (Remarks on the subject of Lactation. London, 1831.)

Weaning ought always to be accomplished in a gradual manner, unless cogent reasons exist for an immediate separation from the breast. A sudden transition from the mild and simple nourishment there obtained, to the exclusive use of a more substantial artificial food, could scarcely fail to produce disorder of the digestive organs and bowels, even in the most robust and healthy children. If done progressively, however, that is, if small portions of the most simple and bland kinds of artificial food be allowed after the first teeth have made their appearance, and its quantity and quality be gradually increased, in proportion as the other cutting teeth come out, the stomach will be sufficiently prepared when the proper

period for estrangement arrives.

After the child has been weaned its principal nourishment ought still to consist of liquid, semi-fluid, or pultaceous substances. Milk, milk boiled with bread or slightly thickened with semolina, sago, or rice, oatmeal gruel,* rusks or nursery biscuits broken down and diffused through warm water, with a little milk and sugar, should constitute the chief nourishment for some months. Along with these, small portions of stale bread, bread and butter, weak and simple broths, and light plain puddings, made of bread, tapioca, &c. may be allowed occasionally with perfect propriety. Eggs contain a large quantity of nutritive matter in a small compass. When lightly boiled, so as to coagulate the greater part of the white, without depriving the yolk of its fluidity, they constitute an appropriate article of food for children after the first teeth have come out. When fried or boiled hard they are altogether unsuitable. yolk, which is the most nourishing part, consists, according to Dr. Prout, of water 170.2 grains, albumen 55.3 and yellow oil 91.0; thus presenting a combination of the albuminous and oleaginous principles, which may be considered as already fitted for the purposes of the animal economy, without undergoing any essential change in composition. It contains, besides, a large proportion of phosphorus in some unknown state of combination; and has been considered analogous to the milk of viviparous animals. Jörg says that a raw yolk, diffused by agitation in a pint of warm water sweetened with sugar, forms an artificial milk substantial enough for nourishing an infant during the early months. (Handbuch der Kinderkrankheiten, p. 232.) An emulsion of this kind constitutes the lait de poule of the French.

As infants bear no abrupt transitions, the quantity of solid food should not be materially increased after weaning, nor should there be any particular increase in the general quantity of nourishment until the stomach has been fully accustomed to the change. We should always remember that in infancy

the reducing power of that organ is weak.

Children should never be weaned when they are sick, unless the indisposition is found to have been produced, or to be

^{*} Preparations of oatmeal, as porridge, are said to cause heat and itching of the skin, owing to a resinous matter soluble in alcohol, which exists in the covering of the grain. I have never witnessed these effects.

supported by an unwholesome state of the milk. (Dewees.) In fixing upon the period some attention should be paid to the season of the year. In general, weaning may be accomplished with less inconvenience and risk of unpleasant consequences to the child during the months of April, May, September, October, and the early part of November, than whilst the weather is very warm or very cold. Exercise in the open air is always highly beneficial at this time. It tends, in no inconsiderable degree, to fortify the system of the child, and to enable its digestive organs to bear without difficulty the alteration in diet.

As soon as the canine or eye-teeth have made their appearance small portions of animal food in a solid state may be allowed once daily, with little or no risk of injury; but they should never be permitted to form the principal part of the aliment. peculiarly excitable state of the system during dentition, and the consequent tendency to febrile irritation, render the free use of such a diet decidedly objectionable during this stage of childhood. The foods most easy of digestion are those of the class mammalia and herbivorous birds. Boiled flesh is more digestible than roasted, in consequence of the induration of the muscular fibres induced by the action of fire. The lean parts of mutton, tender beef, pigeon, and fowl should be selected. According to Dr. Eberle, fresh fish, boiled and taken in moderate quantity, seldom disagrees with the stomachs of children, and may be used occasionally with perfect propriety. Veal, pork, pig, goose, duck, and all kinds of fat or salted meats, being of more difficult digestion, can seldom be eaten without impeding digestion, and finally injuring the tone of the stomach. By the process of salting, the texture of the fibres is so changed, as to be less nutritious as well as less Of all the meats in common use veal is decidedly the most objectionable.

Fresh vegetables are not adapted for the food of infants. The mucilage which they contain is neither possessed of very nutrient properties, nor is it very digestible, being prone to ferment in delicate stomachs. Spinach, one of the most esteemed for lightness, passes through the bowels very little changed, tinging the stools green. In like manner, the starch in the boiled potato, which is identical with arrow-root, is so enveloped with vegetable fibrin and coagulated albumen,

as to form a coherent mass, difficult of assimilation.

Strongly-seasoned, fried and broiled meats, compound dishes,

ragouts, hashes, meat-pies, and the like are to be wholly excluded. Pastry and all combinations of flour and butter, in which the latter has to be subjected to heat and then to be rendered rancid, are not only indigestible, and thus apt, says Dr. Osborne, to provoke a large secretion of sour fluid from the gastric glands, but are also in a high degree irritating to the mucous membrane of the stomach. (Dublin Journal of Medical Science, Jan. 1839.) Simplicity and plainness are all important requisites in the diet of children. Indeed, the fewer and simpler their articles of food, the better. "Many people," says an eminent writer, "from a mistaken expectation of strengthening weakly children, give them more animal food, and sometimes twice or thrice a day: but it will be found much more frequently to add to the debility than to the increase of strength. Those children on the whole who eat the least animal food are the most healthy. Nothing is more absurd than the notion, that in early life children require a variety of food. One food only is provided by nature for them, and it is too presumptuous to assume that the Creator of the world acted in error, and that the ingenuity of man is able to correct it or make any improvement in his

The child should be taught to take its food slowly, retain it in its mouth long, and swallow it tardily. From three to four hours may be allowed to elapse between each meal. It will then, if appropriate, be digested and assimilated, instead of first annoying the stomach and then disordering the bowels. If the child require nourishment in the interval, small portions of liquid aliment may be administered. When solid animal food forms part of the diet, it should be taken at noon, or a little before; and, as before stated, not more than once a day,

as a general regulation.

Pure water, with or without the addition of milk, or toast and water made with toasted biscuit, constitutes the best drink for children, as well as for adults. The practice of allowing them a little wine, spirits, or malt-liquor is most blameworthy. Children require no stimulus to excite and sustain their vital functions. During the irritable period of dentition, the use of such drinks is especially dangerous; the alcoholic stimulant having a direct tendency to determine an undue afflux of blood to the head, and thereby to augment the liability to inflammatory diseases in the brain of the most fatal character. Wine, moreover, disorders the digestive organs of children. Marcellin has related an instance of seven children in a family whose bowels

became infested with worms, from this cause. They were cured by substituting water for the pernicious beverage.

Salt and sugar are the only condiments required for the food of children. Sugar assimilates much better with vegetable than with animal food; and its use is strongly recommended by Professor Leroy. Although a non-azotized substance, it is highly nutritious—the azote being probably obtained from the air in respiration, and uniting with the elements of the sugar to constitute the substance of the animal to which it has to serve as aliment. If we believe Dr. Rush, the plentiful use of it is one of the best preventives of the diseases occasioned by worms. (Medical Inquiries and Observations, Vol. 1., p. 230.) It has been a common prejudice, that it injures the teeth; but the idea seems to have originated in frugality rather than in philosophy. "During the sugar season," observes Dr. Dunglison, "the negroes of the West India islands drink copiously of the juice of the cane, yet their teeth are not injured; on the contrary, they have been praised by writers for their beauty and soundness; and the rounded form of the body, whilst they can indulge in the juice, sufficiently testifies to the nutrient qualities of the saccharine beverage." (Elements of Hygiène, p. 231. Philadelphia, 1835.) Although wholesome in the concentrated form, yet when taken dissolved in a large quantity of water, it is apt to generate acidity and disorder the stomach. Before leaving this subject, it ought to be observed, that the luscious products of modern confectionary are among the most indigestible substances employed as food. Hence indulgence in the use of sweatmeats is a fertile source of disease and mortality during childhood. It is not the mere sugar, but it is the combination which proves so injurious. There are few individuals, even in adult age, whose digestive organs are sufficiently vigorous to bear such articles without inconvenience; and their frequent or abundant employment rarely fails to impair the tone of the stomach, and to cause intestinal disturbance. Dried fruits, nuts, &c. preserved with sugar, and baked sugar should be totally withheld.

Children who are not allowed a sufficient quantity of salt are extremely liable to worms; for whenever the powers of the system, and especially those of the stomach, are enfeebled by the want of *proper* nourishment, both as respects quality and quantity, these parasitic animals find a nidus favorable to their development, and the only way to prevent their generation is

228 Fruits.

to improve the tone of the system generally and the stomach in particular. Salt fulfils this indication, but its agency is more exerted in preventing than in removing worms. A little of this condiment may be advantageously added to the farinaceous food of children.

With regard to the use of fresh fruits, writers on this subject have expressed different opinions; but I think it may be laid down as a general rule, that every kind of fresh fruit is improper for children whose digestive organs are weak, or who are habitually prone to disorders of the bowels. If the digestive powers are vigorous, and there exists no obvious tendency to such complaints, small portions of ripe and mellow apples, peaches, apricots, oranges, or a few grapes, the seeds and skins being rejected, may be allowed occasionally with little or no risk of mischief. It is of much importance, however, that the quantity of such articles taken into the stomach at a time be moderate; and that they never, with children, be suffered to form the whole, or even principal part of meals. In children of a costive habit the temperate use of these fruits may have indeed a beneficial effect, by their tendency to excite the action of the bowels. Pears are more indigestible than apples and seldom fail to produce some uneasiness and disturbance in the alimentary canal. All unripe fruits, and all fruits containing small, hard, and insoluble seeds, such as strawberries, currants, &c. are improper articles of food for children. The seeds of the latter, resisting the digestive powers, irritate the mucous membrane of the bowels, and sometimes induce serious disease. "Small insoluble bodies of this kind," says Dr. Eberle, "frequently remain lodged in the folds of the bowels for many days, and even weeks, and give rise to severe and unmanageable disorders of the alimentary canal. I have known a child to evacuate from its bowels a great many small seeds, three weeks after the fruit which contained them had been eaten; and during all this time, it had suffered painful and exhausting diarrhea." (Op. cit. p. 42.) Cherries are among the most pernicious fruits with which children can be indulged. When swallowed with the stones, convulsions, inflammation, unconquerable constination, and exhausting and tormenting diarrhœa are among the affections which have been known to Fruits preserved with their skins are more or less prejudicial. Two or three raisins have been known to produce the most serious and protracted disorder of the intestinal canal in infants.

# TREATMENT OF POISONING.

### GENERAL RULES.

GIVE emetics or use the stomach-pump, if the poison do not cause full vomiting. Exhibit antidotes. Allay irritation. Combat inflammation.

### Poisons and their Antidotes.

- ARSENIC. The stomach-pump, or emetics to excite repeated vomiting, afterwards large draughts of milk or any farinaceous decoction. Hydrated sesquioxide of iron, castor-oil, bloodletting, fomentations, enemata, blisters; lastly, opium in small and repeated doses.
- Antimony. Repeated draughts of warm water, with infusion or tincture of Peruvian bark, or decoction of oak-bark. Small doses of opium, and milk enemata.
- COPPER. Whites of eggs, milk or flour in water, ferrocyanate of potash, sugar.
- SILVER, as Lunar Caustic. Solution of common salt.
- MERCURIAL SALTS. Whites of eggs, flour and water, milk, iron-filings.
- LEAD, BARYTES. Solutions of sulphate of soda or sulphate of magnesia in well or spring water; then emetics.
- Acids (Mineral). Chalk, whiting or magnesia suspended in water; or soap-suds.
- Hydrocyanic or Prussic Acid. Aqueous solution of chlorine, inhalation of diluted ammonia, cold affusion, artificial respiration, bloodletting.

Oxalic Acid. Chalk or magnesia suspended in a little water, without delay.

Alkalis. Vinegar, lemon or orange-juice, or oil in large quantity.

IODINE. Starch or arrow-root in water, sugar and water.

PHOSPHORUS. Mucilaginous drinks, magnesia.

Cantharides. Emetics to excite free vomiting, or the stomachpump, then mucilaginous drinks and enemata, camphor and Dover's powder in small and repeated doses; introduction of the catheter.

GROUND GLASS. Mashed potatoes, and the like.

Nux Vomica. Repeated vomiting, infusion of bark or galls, ether with oil of turpentine, equal parts.

OPIUM and other NARCOTICS. Prompt evacuation of the contents of the stomach, cold affusion over head and breast, forced exercise, moderate use of ammonia to nostrils, artificial respiration, bloodletting.

Poisonous Mushrooms. Emetics to excite free vomiting; then oily and mucilaginous drinks.

ALCOHOL and SPIRITUOUS LIQUORS. The stomach-pump; then injection of cold water into the ears, cold affusion over head and neck, warmth to the extremities, internal use of ammonia or spirit of Mindererus; lastly, leeches and cold to the head.

CARBONIC ACID and CARBONIC OXIDE. Exposure to fresh air, cold dash, artificial respiration, abstraction of a small quantity of blood.

STINGS of WASPS or BEES. Extraction, if possible, of the sting; then application of a saturated solution of common salt, honey, or a lotion of carbonate of ammonia.

# GLOSSARY,

EXPLAINING

## THE TECHNICAL TERMS.

Abdomen, the belly.

Abscess, a collection of purulent matter, formed or deposited within the structure of a part.

Acidities, sourness of the stomach and bowels; the result of indigestion, indicated by acid eructations, &c.

Acne, a small pimple or tubercle on the face.

Adjuvant, a medicine introduced into a prescription to aid the operation of the principal ingredient; also, whatever assists in the removal or prevention of disease.

Adynamia, considerable debility of the vital powers such as

occurs in typhus fever.

Affusion, the act of pouring a liquid on any part of the body.

Albumen, an immediate principle of animals and vegetables, which constitutes the chief part of the white of the egg.

Alcohol, highly-rectified spirit of wine.

Alterative, a medicine supposed to be capable of producing a healthy change in a diseased state, but without exciting any sensible evacuation.

Alvine, that which relates to the lower belly.

Amaurosis, partial or total loss of sight.

Anamia, deficiency of blood.

Anasarca, dropsy of the cellular membrane.

Angina, quinsy or sore throat.

Anorexia, absence of appetite, without loathing.

Antacids, remedies which correct acidity in the stomach.

Anthelmintic, a remedy which destroys or expels worms.

Antiphlogistic, opposed to inflammation. Aorta, the chief artery of the body.

Aphtha, the thrush or sore mouth of infants.

Apyrexia, absence of fever; the condition of an ague between the paroxysms.

Arachnitis, inflammation of one of the membranes of the

brain.

Ascarides, the thread or maw-worms.

Ascites, dropsy of the belly.

Asphysia neonatorum, suspended animation of the new-born.

Assimilation, the act by which living bodies appropriate and transform into their own substance matters with which they

may be placed in contact.

Astringents, medicines which have the property of constringing the organic textures.

Atony, diminution or loss of tone, weakness.

Atrophy a wasting away of a part or of the whole frame.

Bolus, a pharmaceutical preparation, having a pilular shape but larger.

Borborygmus, the noise made by flatulence in the intestines. Bronchia, bronchie, and bronchi, two tubes, prolongations of the windpipe, which carry air into the lungs.

Bronchitis, inflammation of the bronchial tubes.

Bronchocele, enlargement of the thyroid gland, "Derbyshire neck."

Buccal, relating to the mouth and particularly to the cheeks. Bulla, a bleb.

Cuchexia, a depraved state of the constitution without fever. Cancrum oris, a corroding ulcer of the mouth.

Capillary vessels, the extreme radicles of the arteries and veins: these together constitute the capillary system.

Carditis, inflammation of the fleshy substance of the heart.
Carminatives, medicines which soothe and cause the expulsion of flatulence from the alimentary canal.

Cathartic, a remedy which produces evacuation of the bowels. Cerebral, belonging to the brain.

Cholera, infantile, watery gripes.

Chorea, an affection characterized by irregular and convulsive motions of the muscles of the limbs, face, and trunk; absurdly called St. Vitus's dance.

Clonic, irregular convulsive motions. Colostrum, the first milk after delivery.

Coma, a state of profound sleep, from which it is extremely difficult to rouse the individual.

Company of the same kind or species

Congener, of the same kind or species.

Congenital, Congenite, diseases of infants at birth.

Congestion, accumulation of blood or other fluid in an organ or part of the body.

Colliquative, an epithet given to various discharges which produce rapid exhaustion.

Collyrium, an application for affections of the eye.

Conjunctiva, the membrane covering the anterior surface of the eye and the inner surface of the eyelids; so called, because it unites the globe of the eye with the eyelids.

Constipation, a confined state of the bowels.

Corrective, a substance in a pharmaceutical formula, added to a medicine to temper or modify its action.

Corroborant, any substance which imparts strength and tone.

Coryza, "a cold in the head."

Counter-Irritation, an irritation excited in a part of the body with the view of relieving one existing in another part.

Crasis, constitution, temperament. Cynanche, sore throat.

——— Maligna, malignant, putrid, or ulcerous sore throat.
——— Parotidea, mumps.

Defecation, the act by which the excrement is extruded from the body.

Deglutition, the act of swallowing.

Dejection, the expulsion of the faces.

Demulcent, a medicine of a saccharine or mucilaginous nature, employed to allay irritation.

Dentition, the process of teething.

Deobstruents, medicines given with the view of removing any obstruction.

Derivative, see Counter-Irritant.

Dermoid, resembling or belonging to the skin.

Desquamation, separation of the scarf-skin in the form of scales, of a greater or less size.

Detergents, medicines possessing the power of cleansing wounds and unhealthy surfaces.

Diabetes, a disease characterized by great augmentation and manifest alteration in the secretion of urine.

*Diaphoretics*, medicines which excite perspiration.

Diaphragm, a muscle which separates the belly from the chest.

Diarrhæa, a looseness.

Diathesis, disposition, affection of the body.

Diuresis, an abundant secretion of urine.

Diuretics, medicines which increase the secretion of urine.

Dorsal, belonging to the back.

Duodenum, the first bowel below the stomach.

Dyscrasia, a bad habit of body.

Dysentery, inflammation of the mucous surface of the large intestines.

Dyspepsia, depraved digestion.

Dysuria, difficulty of passing the urine.

Eczema, a hot painful eruption of minute vesicles on various parts of the skin, more or less crowded together.

Electuary, a pharmaceutical composition, in consistence somewhat thicker than honey.

Embrocation, a fluid application to be rubbed on any part of the body.

Emunctory, any organ giving issue to matter which ought to be removed from the system.

Encephalitis, inflammation of the brain.

Enema or Enemata, injection or injections.

Enteritis, inflammation of the bowels.

Enuresis, incontinence of urine. Epidermis, the scarf-skin or cuticle.

Epispastic, anything which applied to the skin produces a blister.

Escharotics, substances which produce mortification of the part to which they are applied.

Exacerbation, an increase in the symptoms of a disorder.

Exanthema, exanthem, eruptive diseases accompanied with fever.

Excitability, the capacity to be acted upon by stimuli.

Excitation or excitement, act of exciting, or state of an organ or organs excited.

Excretion, the separation or throwing off from the body those matters which are supposed to be useless, as urine, perspiration. &c.

Exfoliation, the act of casting off dead bone or scales.

Exhalant, an epithet applied to a set of vessels which pour out a peculiar fluid on the surface of different internal membranes and skin.

Expectorants, medicines which promote the discharge of mucous and other fluids from the air-passages.

Fæces, the excrements.

Farinaceous, mealy.

Fætal, relating to the fœtus.

Fætus, a young animal before birth.

Formula, a prescription.

Furfuraceous, resembling bran.

Gangrene, death of a part or the whole of an organ. Gastric, belonging or relating to the stomach.

Hamorrhage, a discharge or escape of blood from the vessels or channels in which it circulates in the healthy state of the body.

Helminthiasis, a generic term for diseases caused by the

presence of intestinal worms.

Hepatic, belonging or relating to the liver.

Herpes, tetter.

Hydrocephalus, dropsy of the brain.

Hydropic, dropsical.

Hydrothorax, dropsy of the chest.

Hypercatharsis, excessive purgation.

Idiopathic, an original affection of a part.

Idiosyncracy, individual peculiarities, hereditary or induced. Infiltration, the diffusion of fluids into the cellular tissue.

Ingesta, a Latin term for designating the food, drink, &c. Irritation, the action produced by any stimulus. Ischuria, a suppression of the secretion of urine.

Larynx, the superior portion of the windpipe.

Laryngitis, inflammation of the larynx.

Lepra, a scaly disease of the skin, occurring in circular patches.

Lumbar, belonging to the loins.

Lymphatics are those absorbent vessels of which the contents resemble lymph.

Malignant, a term applied to diseases in which the symptoms appear fatal, as in cynanche.

Meconium, the first discharge by stool from an infant.

Meningitis, inflammation of the membranes of the brain and

spinal marrow.

Metastasis, the supervention of an affection of a new organ, on the subsidence of a similar disorder in some other part or organ.

Narcotics, medicines which induce sleep or stupor. Necrosis, death of a bone.

(Edema, a swelling of a dropsical nature, situate in the cellular tissue.

Esophagus, the passage by which the food is conveyed from the mouth to the stomach.

Officinal, a term applied to any medicine directed by the colleges to be kept in the shops.

Ophthalmia, inflammation of the eye.

Panada, bread-pap. Papula, a pimple.

Paraplegia, palsy of the lower half of the body.

Pectoral, belonging to the breast.

Peristaltic, the designation of the vermicular motion of the intestines.

Phlyctana, a vesicle containing an ichorous fluid.

Pituita, phlegm, viscid mucus.

Plethora, an excessive fulness of the blood-vessels. Pleura, the membrane lining the cavity of the chest.

Pleuritis, inflammation of the pleura.

Pneumonia, inflammation of the lungs.

Porrigo, moist scall.

Prima via, the first passages, the stomach and intestinal tube. Prophylactic, any means employed for the preservation of health.

Psoriasis, dry scall or scaly tetter.

Psorophthalmia, inflammation of the eyelids with ulceration.

Purulent, relating to pus.

Pus, the matter found in abscesses, and other parts after inflammation.

Pustule, an elevation of the cuticle with an inflamed base containing pus.

Rhachitis, rickets.

Remittents, the name of a class of fevers, characterized by remissions and exacerbations, but without intermissions.

Rubefacient, a substance which when applied to the skin, induces redness without blistering.

Scabies, itch.

Secretion, a product separated by a peculiar process from the blood.

Serum, a yellowish liquid, a constituent of the blood.

Sorbefacient, a remedy that promotes absorption.

Strophulus, the name of a genus of cutaneous diseases peculiar to infants, known by the name of gum-rash, red-gum, tootheruption, &c.

Struma, scrofula, the king's evil.

Symptomatic, arising from or indicative of some other affection.

Tabes mesenterica, tubercular disease of the mesenteric glands, followed by emaciation and general disorder of the nutrient functions.

Tania, the tape-worm.

Tenesmus, an ineffectual urging to go to stool.

Therapeutics, is the science of the changes produced on diseased action by medicines.

Thoracic, belonging to the chest.

Tormina, a griping pain. Trachea, the windpipe.

Traumatic, anything relating to a wound.

Trismus, locked jaw.

Tubercle, a tumour in the substance of the skin or any organized part.

Type, is the order in which the symptoms of a disease exhibit themselves, and succeed each other.

Umbilical cord, the cord connecting the child with the mother. Urticaria, an eruption resembling that produced by the sting of a nettle, hence called nettle-rash.

Variola, small-pox.

Vascular system, the system of blood-vessels consisting of the arteries and veins.

Verminous, that which is caused by worms, as a verminous affection.

Vertigo, dizziness, swimming of the head.

Vesical, that which relates or belongs to the bladder.

Vesicate, to blister.

Vesication, blistering.

Vesicle, a small round elevation of the scarf-skin, containing lymph, which may be either limpid or opake.

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### ERRATA.

Page xl. line 20, after effect, insert until two or three suitable doses have been swallowed.

At foot of page lxviii. read as follows:

... provided the functions of internal organs, and more especially those of digestion, be in a healthy state, and adequate reaction succeed the first shock, Where no genial glow, but a feverish chill, with a small frequent pulse, follows it is essentially prejudicial.

Page. 1, prescription 1, line 4, for Zij., read Zvj.

19, line 27, for vera, read verus. 22, line 10, for Micæ panis, read Glycyrrhizæ pulv.

49, line 11, for  $\frac{1}{90}$ th, read  $\frac{1}{30}$ th; and line 12, for  $\frac{1}{48}$ th read  $\frac{1}{20}$ th. 86, line 24, for only, read chiefly. 88, last line, for 6, read 3. 89, line 1, for 3, read  $1\frac{1}{2}$ . 169, line 6, for 1 drachm, read 2 ounces. 200, last line, after cantharides insert digitalis, ammonia, iodine.

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